TR-Rack

EXPANDED ACCESS MODULE

Access

Advanced Control Combined Synthesis System

PC I/F

Effect Guide

KORG

Ⓔ ①

Table of Contents

Insert Effect size1

Insert Effect size2

Insert Effect size4

Master Effects

Modulation

Reverb/Delay

How to use the Effect Guide

The following example shows how this Effect Guide is organized.

(Example)

Effect number, effect name
The names inside the parentheses are used on the Trinity.

09:St.RndmFilter (St. Random Filter)

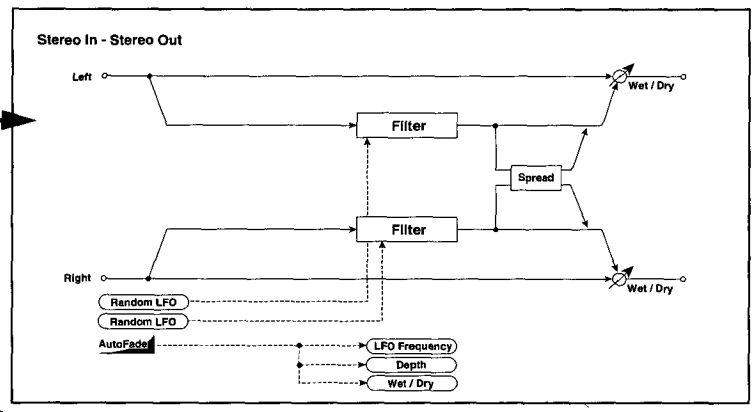
09: St.RndmFilter (St. Random Filter)

This effect is a stereo random filter. You can also fade in the effect sound using Auto-Fade, or change the LFO speed.

size2

Effect size
This indicates the effect size.

Effect block diagram
The diagram shows the effect structure and signal flow.



Parameter value

Parameter name
The names inside the parentheses are used on the Trinity.

This mark appears to indicate that the parameter has the Dynamic Modulation function.

	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod
a	Src	None...A.FADE (AUTO-FADE)	Modulation source of effect balance. AutoFade is available	AutoFade
	Amt	–100...+100	Modulation amount of effect balance	
b	Cutoff	0...100	Filter center frequency	
	Resonance	0...100	Sets the resonance amount.	
	LFO Freq[Hz] (LFO Frequency [Hz])	0.05...50.00Hz	Speed of LFO that modulates the filter	D-mod
c	Src	None...A.FADE (AUTO-FADE)	Modulation source of LFO speed. AutoFade is available	AutoFade
	A (Amt)	–50.00...+50.00Hz	Modulation amount of LFO speed	
	Depth	0...100	Modulation depth of filter center frequency	D-mod
d	Src	None...A.FADE (AUTO-FADE)	Modulation source of filter modulation. AutoFade is available	AutoFade
	Amt	–100...+100	Modulation amount of filter modulation	
e	Spread	–100...+100	Sets the spread of stereo image of the effect sound. ☞P.60	
f	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

Explanation of parameters

This mark appears to indicate that the AutoFade function is available.

f: AUTOFADE Src
f: Fade-In Rate

If AutoFade is selected for the LFO speed, depth of modulation, and Effect Balance, you can use the AutoFade function to apply modulation.

The AUTOFADE Src parameter selects the modulation source that triggers AutoFade. The Fade-in Rate parameter specifies the rate of fade-in.

This mark appears at the beginning of the explanation regarding MIDI.

MIDI The effect is off when a value for the dynamic modulation source specified for the AUTOFADE Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.

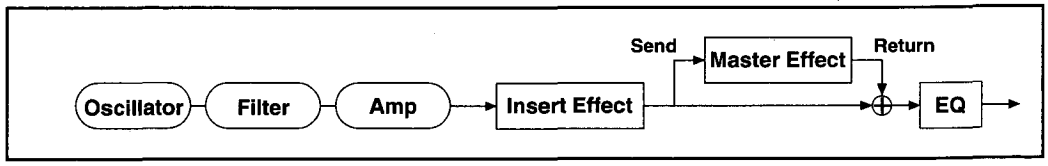
Note

- "CC#" that often appears in this guide is the abbreviation of "Control Change number."

Overview

The **TR-Rack** has two types of effects: **Insert Effects** and **Master Effects**.

As shown in the figure below, you can use the Insert Effects in the process of sound creation after the Oscillator, Filter, and Amp. Then, reverberation and other effects are applied through the Master Effects.
One hundred Insert Effects and **fourteen** Master Effects enable highly flexible sound production.



The **TR-Rack** does not have an input level meter to recognize the effect input level. Please note that if the input level is not high enough, the S/N ratio may be reduced, and if the input level is too high, clipping may occur. To obtain the optimum quality of effects, first set the input level of the Insert Effect and Master Effect to the maximum possible without clipping, then adjust the effect output level using the Wet/Dry parameter of the Insert Effects, and the Output Level parameter and/or Return 1 and 2 of the Master Effects.

The following table shows the parameters that can be used to adjust the input/output levels:

	Program Edit mode	Combination Edit mode	Multi mode
Input	Amp Level (Page2) Master FX Send1, 2 (Page14, 15) IFX Send MFX1, 2 (Page24) Trim Parameter (Page16, 17, 18, 19, 25, 26)*	Level (Page2) MFX Send1, 2 (Page25, 26) IFX Send1, 2 (Page36) Trim Parameter (Page28, 29, 30, 31, 37, 38)*	Level (Page2) MFX Send1, 2 (Page16, 17) IFX Send1, 2 (Page27) Trim Parameter (Page19, 20, 21, 22, 28, 29)*
Output	Wet/Dry (Page16, 17, 18, 19) Output Level (Page25, 26) Master FX Return1, 2 (Page29)	Wet/Dry (Page28, 29, 30, 31) Output Level (Page37, 36) Master FX Return1, 2 (Page41)	Wet/Dry (Page19, 20, 21, 22) Output Level (Page28, 29) Master FX Return1, 2 (Page32)

*: Certain effects may not utilize some of these parameters.

Insert Effects

Insert Effects are used as part of the sound creation process.

You can select any effects from the effect library, which contains **100 effects**, ranging from effects that change tone and dynamics, such as the equalizer, limiter, exciter, etc.; to effects that simulate particular characteristics of certain musical instruments, such as amp simulation, rotary speaker, and piano body/damper simulation; effects that create conventional effect sounds, such as ring modulator, talking modulator, vocoder, and pitch shifter; completely new types of effects, such as decimator and resonator; and classic effects, such as reverberation, chorus, delay, and overdrive.

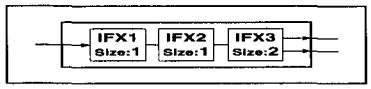
Insert Effects employ the concept of "**size**", which offers more flexible effect routings for different applications.

In Program mode, you can use up to **three effects in series** (or up to **four effects in series/parallel** for a Program that uses Drum oscillator).
In the Combination and Multi modes, you can use up to **three effects** in series for each Timbre or Track (or up to **four effects in series/parallel** for each Timbre or Track that uses a Drum oscillator Program). In total, you can use up to **eight effects** for all Timbres/Tracks.
For more detailed information, refer to the block diagrams and explanations below for each mode.

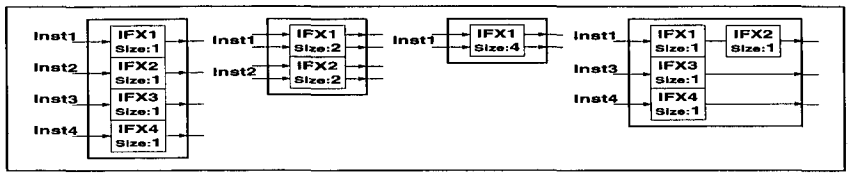
Effect Size

Insert Effects utilize effect sizes of 1, 2, and 4.

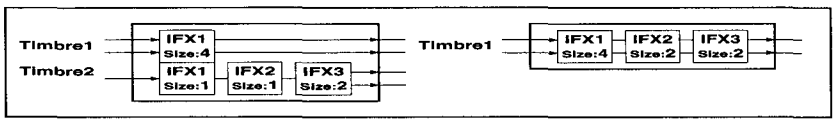
Program (Single/Double oscillator Program):
Up to three effects with a total effect size of four or less can be inserted in series.



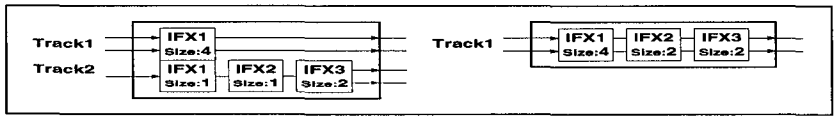
Program (Drum oscillator Program):
Up to four effects with a total effect size of four or less can be inserted in series/parallel.
The DrumKit sounds (see page 5) have already been assigned to Insts 1–4.



Combination:
Up to eight effects with a total effect size of eight or less can be inserted.



Multi:
Up to eight effects with a total effect size of eight or less can be inserted.



Effect Input/Output

The following table shows the input/output of the **Dry** sound (the sound without any effect applied) and the **Wet** sound (the sound with an effect applied) for each size.

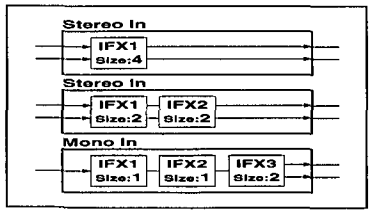
size1	Dry	Mono In - Mono Out	Effect
	Wet	Mono In - Mono Out	
size2 size4	Dry	Stereo In - Stereo Out	Effect
	Wet	Mono In - Mono Out	
	Dry	Stereo In - Stereo Out	Effect
	Wet	Mono In - Stereo Out	
	Dry	Stereo In - Stereo Out	Effect Effect
	Wet	Stereo In - Stereo Out	

Shown on the upper left corner of the effect block diagrams.

The Size 1 effects are all monaural in/monaural out for both dry and wet sounds. Therefore, Size 1 effects have monaural input as shown in the figure on the next page. If the Effect On/Off parameter is turned OFF, the effect is bypassed. When a size 1 effect is selected, the bypass sound becomes monaural.

MIDI Regardless of the Effect On/Off setting, you can turn all Insert Effects OFF by sending the Effect 2 Control message (Controller #92). When the Controller value is 0, all effects turn OFF. They turn On with a value of 1–127.

When you want to preserve the stereo image of a Double mode Program, use Insert Effects of size 2 or 4.



Grouping

You can use the grouping function in the Combination and Multi modes to use the Insert Effects efficiently. The effect **grouping** function places the Timbres/Tracks into one group so that the same Insert Effects will be applied to all of them.

Note the following when you are trying to place Timbres/Tracks that use Single/Double oscillator Programs, and Timbres/Tracks that use Drum oscillator Programs into a group:

- **When you are adding Timbres/Tracks that use Single/Double oscillator Programs to a group of Timbres/Tracks that use Drum oscillator Programs:**
  The Timbres/Tracks will be grouped (input) to Insert Effect inst1 (IFX1) of the Timbres/Tracks that use Drum oscillator Programs.
- **When you are adding Timbres/Tracks that use Drum oscillator Programs to a group of Timbres/Tracks that use Single/Double oscillator Programs:**
  Only DrumKit sounds that have been assigned to inst1 will be grouped (input) to the Insert Effects of the Timbres/Tracks that use Single/Double oscillator Programs.

Master Effects

Master Effects use a **send** and **return** routing regardless of the modes, and consist of **two types of effects**: modulation and reverberation/delay, both **mono-in/stereo-out**. These **fourteen effects** can be used to provide overall ambience. It is possible to route the modulation effects and reverb/delay effects in series.

Send levels are set for each oscillator, or after the Insert Effects are applied. In the Combination and Multi modes, you can set the send levels for each Timbre/Track, allowing you to use the unit as a mixer to create a spacious effect for entire Programs, Combinations, or Multi.

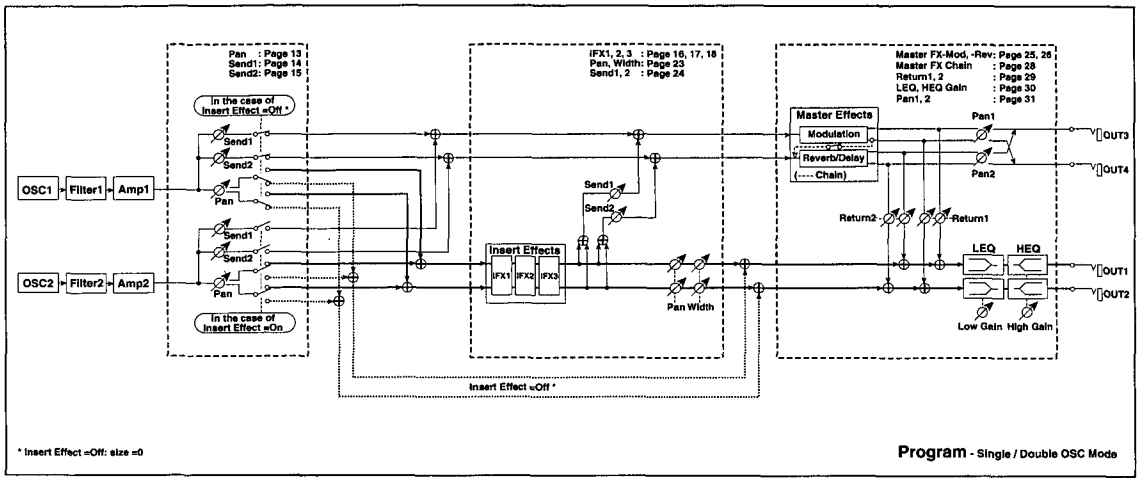
A Low/High-type **shelving EQ** is located before the output connectors 1/L/MONO and 2/R, and allows you to "fine-tune" the tone of your sound.
The Master Effect parameters are set for each Program, Combination, and Multi.

MIDI The Effect 4 Control message (Controller #94) will turn the modulation effects on/off, and the Effect 5 control message (Controller #95) will turn the reverb/delay effects on/off. Both control messages are sent on the Global MIDI Channel. With a control value of 0, the effect is turned OFF, and with a value of 1–127, the effect is turned on.
The Effect 3 Level message (Controller #93) will adjust the send level of the modulation effects, and the Effect 1 Level message (Controller #91) will adjust the send level of the reverb/delay effects. The control messages for Programs are sent on the Global MIDI Channel, and control messages for Combinations and Multi are sent on the MIDI Channels specified for each Timbre and Track.

Program

You can use the Insert Effects as long as the total of the effect size is four or less in Program mode.
The configuration of the Insert Effects is different when using a Single/Double oscillator Program than when using a Drum oscillator Program.

Program - Single/Double OSC mode

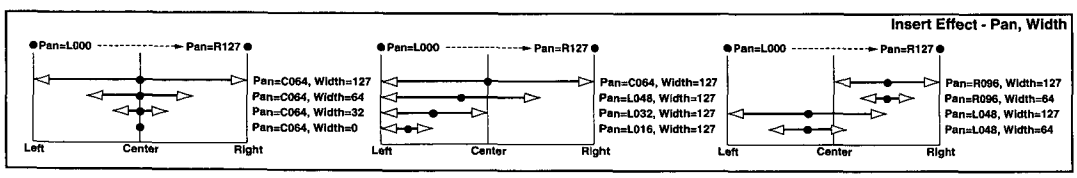


Insert Effects

You can insert up to **three effects in series** as long as the total of the effect sizes is **four or less** when you are using a Single/Double oscillator Program(shown as IFX1, IFX2, and IFX3 in the center of the figure above).

If you insert a size 1 effect, the input/output becomes monaural. In this case, the oscillator's Pan parameter (Page13 in Program Edit mode) becomes ineffective, and the pan setting will be in the center. Adjust the stereo pan position using the IFX Pan parameter that comes after the Insert Effects (Page23 in Program Edit mode).

If the Insert Effect output is in stereo, you can control the width of the effect (such as the width of reverberation) using the Width parameter (Page 23: IFX Pan in Program Edit mode). If you wish to make the oscillator's Pan setting (Page 13 in Program Edit mode) effective, set the IFX Pan setting to C064 and set the Width to 127.

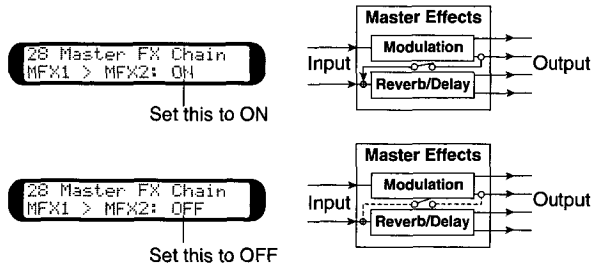


Master Effects

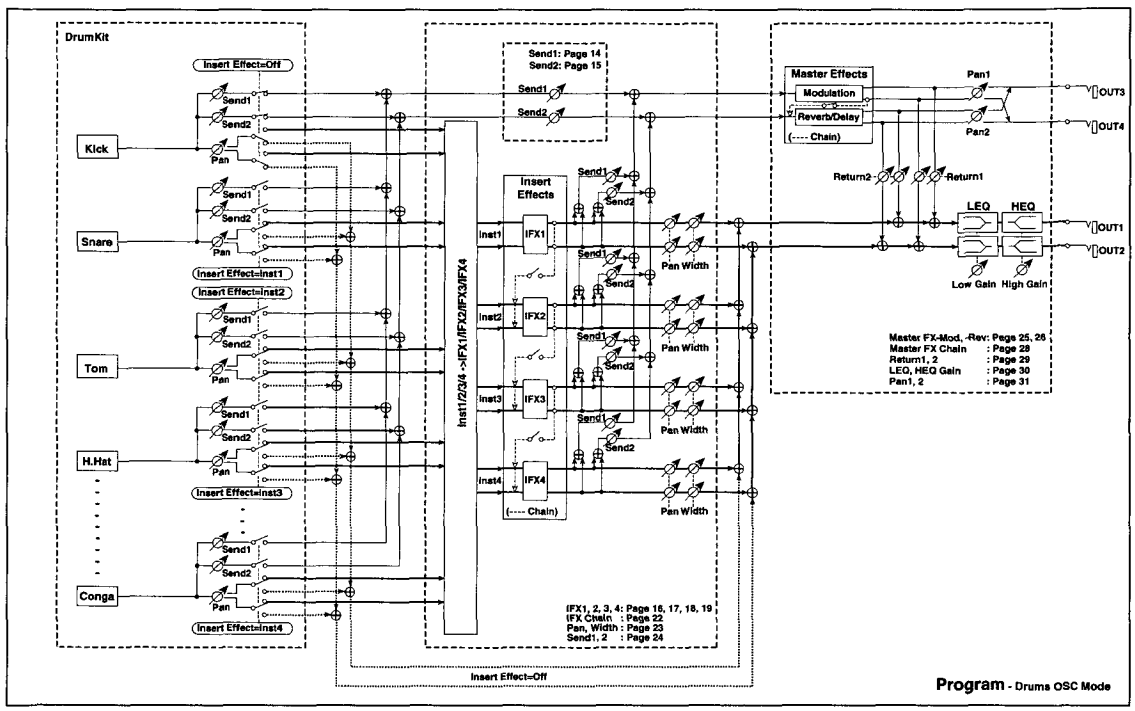
The input level of the Master Effects is set by Send 1 and 2.

Since the destination of the send routing changes depending on whether the Insert Effects have been turned on or not, the parameters will change accordingly.
If you have used any Insert Effects, the Send 1 and 2 parameters of Page 24: IFX Send MFX in Program Edit mode will become effective. If you have not used any Insert Effects, the setting of Page 14: Master FX Send 1 and Page 15: Master FX Send 2 in Program Edit mode will become effective.
The Send 1 and 2 parameters are also used to set the level of the signal appearing at output connectors 3 and 4.
Only the Master Effect sound will be sent to output connectors 3 and 4. If you wish to output dry sound (without the Master Effects applied), set the Master Effect parameters of Page 25: MstrFX1-Mod and Page 26: MstrFX2-Rev to "OFF." In this case, however, the Master Effects will not be applied to the signal at outputs 1 and 2.
If output connectors 3 and 4 are used for stereo output, you can set the stereo position of Send 1 and 2 using the M1 and M2 parameter of Page 31: MFX Pan to Out3/4.

To set the Master Effect return level, use the MFX1 and MFX2 parameters (Page 29: Master FX Return).
Page 28: Master FX Chain allows you to set the connection of Master Effect 1 (Modulation) and Master Effect 2 (Reverb/Delay). If you set MFX1>MFX2 to ON, the right channel output of Master Effect 1 will be added to the Master Effect 2 input. If you set MFX1>MFX2 to OFF, Master Effect 1 and 2 will be used in parallel. (See the diagram on the next page.) In this case, you can still set the MFX1 and MFX2 parameters of Page 29: Master FX Return independently.



Program - Drums OSC mode



Drum oscillator Programs use DrumKit sounds, and drum sounds, such as snare and bass drum, have already been assigned to the keyboard. Assignment of Inst 1–4, volume level, and pan position have also been set. (You cannot change these settings using only this unit.)
Programs that use DrumKit sounds for the oscillator and have the filter, amp, and effect settings appropriate for the drum sounds are called Drum oscillator Programs. (See the Voice Name List.)

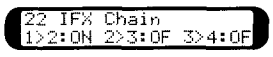
Insert Effects

You can insert up to **four** effects **in series or parallel** as long as the total of the effect sizes is **four or less** when you are using a Program that uses a drum oscillator (shown as IFX1, IFX2, IFX3, and IFX4 in the center of the figure above).

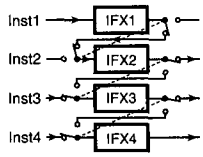
If you insert a size 1 effect, the input/output becomes monaural. In this case, the Pan parameter becomes ineffective, and the sound will be panned in the center. Adjust the stereo position using the IFX1–4 Pan parameters (Page 23) that comes after the Insert Effects.

If the Insert Effect output is in stereo, you can control the width of the effect (such as the width of reverberation) using the Width parameter (Page23: IFX Pan in Program Edit mode). If you wish to make the DrumKit's Pan setting effective, set the Pan parameter (Page23: IFX Pan) to C064 and set the Width to 127.

For the Programs that use drum oscillators, Page 22: IFX Chain allows you to set the connection of each Insert Effect. Three parameters are available: 1>2 (Insert Effect 1 and 2 are connected), 2>3 (Insert Effect 2 and 3 are connected), and 3>4 (Insert Effect 3 and 4 are connected). With the ON setting, the effects are connected in series. With the OF (OFF) setting, two effects are connected in parallel. For example, if you set 1>2 to ON, the output of Insert Effect 1 will be sent to Insert Effect 2. The signal that was sent to Insert Effect 2 when the effects are connected in parallel (Inst2) will be bypassed.



Settings of 1>2: ON, 2>3:OF (OFF), and 3>4: OF (OFF)



Master Effects

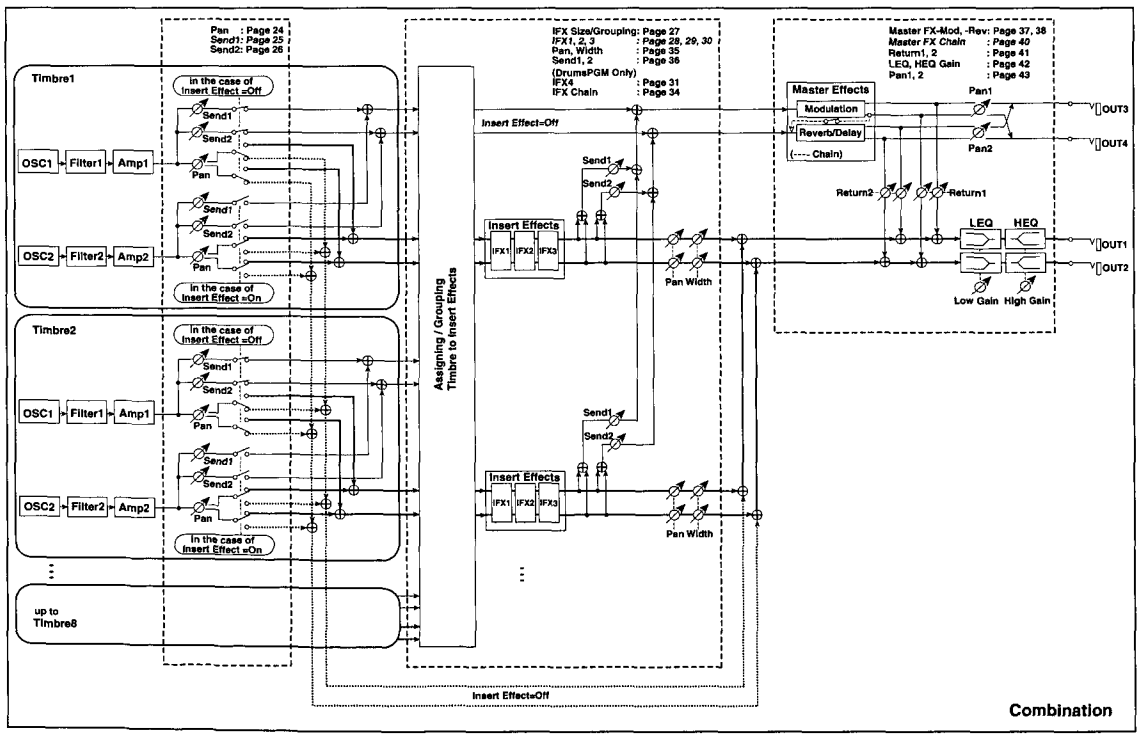
The input level of the Master Effects is set by Send 1 and 2.
Since the destination of the send routing changes depending on whether the Insert Effects have been turned on or not, the parameters will change accordingly.

If you have used any Insert Effects, the settings of "Page24: IFX1–4 Send MFX" in Program Edit mode will become effective. If you have not used any Insert Effects, the settings of "Page14: Master FX Send1" and "Page15: Master FX Send2" in Program Edit mode will become effective.

The Send 1 and 2 parameters are also used to set the level of signal appearing at output connectors 3 and 4.
Only the Master Effect sound will be sent to output connectors 3 and 4. If you wish to output dry sound (without the Master Effects applied), set the Master Effect parameters of "Page25: MstrFX1–Mod" and "Page26: MstrFX2–Rev" in Program Edit mode to "OFF." In this case, however, the Master Effect will not be applied to the signal at outputs 1 and 2.
If output connectors 3 and 4 are used for stereo output, you can set the stereo position of Send 1 and 2 using the M1 and M2 parameters (Page31: MFX Pan to Out 3/4 in Program Edit mode).

To set the Master Effect return level, use the MFX1 and MFX2 parameters (Page 29: Master FX Return).
Page 28: Master FX Chain allows you to set the connection of Master Effect 1 (Modulation) and Master Effect 2 (Reverb/Delay). If you set MFX1>MFX2 to ON, the right channel output of Master Effect 1 will be added to the Master Effect 2 input. If you set MFX1>MFX2 to OFF, Master Effect 1 and 2 will be used in parallel. (Refer to Master Effect in Program-Single/Double OSC mode.) In this case, you can still set the MFX1 and MFX2 parameters of Page 29: Master FX Return independently.

Combination



Insert Effects

The Insert Effects selected in Program Edit mode are **not used** in Combination Edit mode. Instead, you can set Insert Effects for up to eight Timbres in a Combination.

Go to Page27 in Combination Edit mode, and set the Insert Effect's Off, size (1, 2, 4, 8), and grouping parameters for each of Timbres 1–8.
If you wish to use a Program's Insert Effect settings by using the Copy function, first select a size for the corresponding Timbre equal to or greater than the size of the effects used in the Program.

You can route up to **three** Insert Effects for each Timbre **in series**. (If the Program is using a Drum oscillator, you can use up to **four** effects **in series or parallel**.)
The total effect size for all the Timbres must be **eight or less**.
You can also set the total effect size for a single Timbre to eight. However, if you are routing three Insert Effects in series, you cannot place an effect of size 4 on the second position. For a Timbre that uses a Drum oscillator Program, you can set the total effect size to eight. However, if you are routing three Insert Effects in series, you cannot place the effect of size 4 on the second position. If you are routing four effects in series, you cannot place an effect of size 4 on the second or third position.

If you insert a size 1 effect, the input/output becomes monaural. In this case, the Timbre's Pan parameter (Page24 in Combination Edit mode) becomes ineffective, and the pan setting will be in the center. Adjust the stereo pan position using the IFX Pan parameter (Page35 in Combination Edit mode) that comes after the Insert Effects.

If the Insert Effect output is in stereo, you can control the width of the effect (such as the width of reverberation) using the Width parameter (Page35: IFX Pan in Combination Edit mode). If you wish to make the oscillator's Pan setting (Page13 in Program Edit mode) effective, set the IFX Pan setting that comes after the Insert Effects to C064 and set the Width to 127.

When you are adding Timbres/Tracks that use Single/Double oscillator Programs to a group of Timbres/Tracks that use Drum oscillator Programs, they will be grouped (input) into Insert Effect inst1 (IFX1) of the Timbres/Tracks that use Drum oscillator Programs.
When you are adding Timbres/Tracks that use Drum oscillator Programs to a group of Timbres/Tracks that use Single/Double oscillator Programs, only DrumKit sounds that have been assigned to inst1 will be grouped (input) into the Insert Effects of the Timbres/Tracks that use Single/Double oscillator Programs.

Master Effects

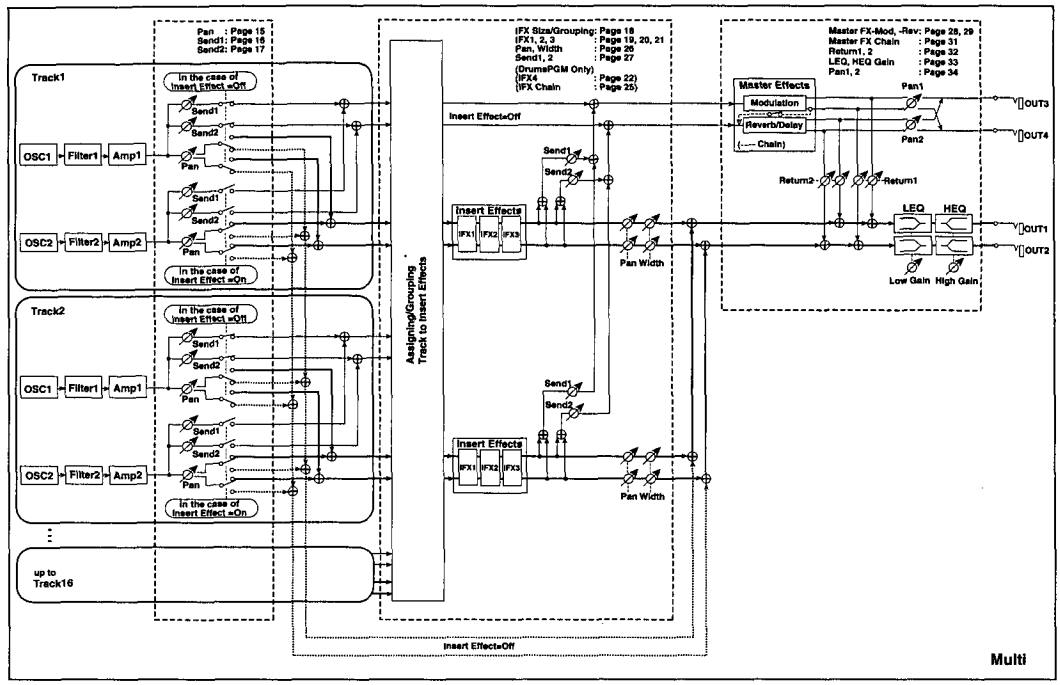
You need to set the Master Effects in the Combination, since the Master Effects set in Program Edit mode are ineffective here.

The input levels of the Master Effects are set by Send 1 and 2.
Since the destination of the send routing changes depending on whether Insert Effects have been turned on or not, the parameters will change accordingly.
If you have used any Insert Effects, the Send 1 and 2 parameters of Page36: IFX Send in Combination Edit mode will become effective. If you have not used any Insert Effects, the settings of Page25: MFX Send1 and Page26: MFX Send2 will become effective.

The Send 1 and 2 parameters are also used to set the level of signal appearing at output connectors 3 and 4.
Only the Master Effect sound will be sent to output connectors 3 and 4. If you wish to output dry sound, set the Master Effect parameters of Page37: MstrFX1–Mod and Page38: MstrFX2–Rev to "OFF." In this case, however, the Master Effects will not be applied either to the output 1 or 2 signal.
If output connectors 3 and 4 are used for stereo output, you can set the stereo position of Send 1 and 2 using the M1 and M2 parameters (Page43: MFX–Pan to Out3/4).

To set the Master Effect return level, use the MFX1 and MFX2 parameters (Page41: Master FX Return).
Page 40: Master FX Chain allows you to set the connection of Master Effect 1 (Modulation) and Master Effect 2 (Reverb/Delay). If you set MFX1>MFX2 to ON, the right channel output of Master Effect 1 will be added to the Master Effect 2 input. If you set MFX1>MFX2 to OFF, Master Effect 1 and 2 will be used in parallel. (Refer to Master Effect in Program-Single/Double OSC mode on page 4 of this book.) In this case, you can still set the MFX1 and MFX2 parameters of Page41: Master FX Return independently.

Multi



Insert Effects

The Insert Effects selected in Program Edit mode are **not used** in Multi mode. Instead, you can set Insert Effects for up to eight Tracks in the Multi.

Go to Page18 in Multi mode, and set the Insert Effect's Off, size (1, 2, 4, 8), and grouping parameters for each of Tracks 1–16.

If you wish to use a Program's Insert Effect settings by using the Copy function, first select a size for the corresponding Track equal to or greater than the size of the effects used in the Program.

If you copy the Combination settings to Multi using Page37: Copy from Comb, the effect settings (Insert Effect and Master Effect) will be copied.

You can route up to **three** Insert Effects for each Track **in series**. (If the Program is using a Drum oscillator, you can use up to **four** effects **in series or parallel**.)

The total effect size for all the Tracks must be **eight or less**.

You can also set the total effect size for a single Track to eight. However, if you are routing three Insert Effects in series, you cannot place an effect of size 4 on the second position. For a Track that uses a Drum oscillator Program, you can set the total effect size to eight. However, if you are routing three Insert Effects in series, you cannot place an effect of size 4 on the second position. If you are routing four effects in series, you cannot place an effect of size 4 on the second or third position.

If you insert a size 1 effect, the input/output becomes monaural. In this case, the Track's Pan parameter (Page15 in Multi mode) becomes ineffective, and the pan setting will be in the center. Adjust the stereo pan position using the IFX Pan parameter (Page26 in Multi mode) that comes after the Insert Effects.

If the Insert Effect output is in stereo, you can control the width of the effect (such as the width of reverberation) using the Width parameter (Page26 in Multi mode). If you wish to make the oscillator's Pan setting (Page13 in Program Edit mode) effective, set the IFX Pan setting that comes after the Insert Effects to C064 and set the Width to 127.

When you are adding Timbres/Tracks that use Single/Double oscillator Programs to a group of Timbres/Tracks that use Drum oscillator Programs, they will be grouped (input) into Insert Effect Inst1 (IFX1) of the Timbres/Tracks that use Drum oscillator Programs.

When you are adding Timbres/Tracks that use Drum oscillator Programs to a group of Timbres/Tracks that use Single/Double oscillator Programs, only DrumKit sounds that have been assigned to Inst1 will be grouped (input) into the Insert Effects of the Timbres/Tracks that use Single/Double oscillator Programs.

Master Effects

You need to set the Master Effects in the Multi mode, since the Master Effects set in Program Edit mode are ignored here.

The input levels of the Master Effects are set by Send 1 and 2.
Since the destination of the send routing changes depending on whether Insert Effects have been turned on or not, the parameters will change accordingly.
If you have used any Insert Effects, the Send 1 and 2 parameters of Page27: IFX Send in Multi mode will become effective. If you have not used any Insert Effects, the Send 1 and 2 parameters of Page16: MFX Send1 and Page17: MFX Send2 in Multi mode will be used instead.

The Send 1 and 2 parameters are also used to set the level of the signal appearing at output connectors 3 and 4.
Only the Master Effect sound will be sent to output connectors 3 and 4. If you wish to output dry sound (without the Master Effects applied), set the Master Effect parameters in Page28: Mstr FX1-Mod and Page29: MstrFX2-Rev to "OFF." In this case, however, you cannot apply the Master Effects to output connectors 1 and 2.
If output connectors 3 and 4 are used for stereo output, you can set the stereo position of Send 1 and 2 using the M1 and M2 parameters (Page33: MFX-Pan to Out3/4).

To set the Master Effect return level, use the MFX1 and MFX2 parameters (Page32: Master FX Return).
Page31: Master FX Chain allows you to set the connection of Master Effect 1 (Modulation) and Master Effect 2 (Reverb/Delay). If you set MFX1>MFX2 to ON, the right channel output of Master Effect 1 will be added to the Master Effect 2 input. If you set MFX1>MFX2 to OFF, Master Effect 1 and 2 will be used in parallel. (Refer to Master Effect in Program-Single/Double OSC mode on page 4 of this book.) In this case, you can still set the MFX1 and MFX2 parameters of Page32: Master FX Return independently.

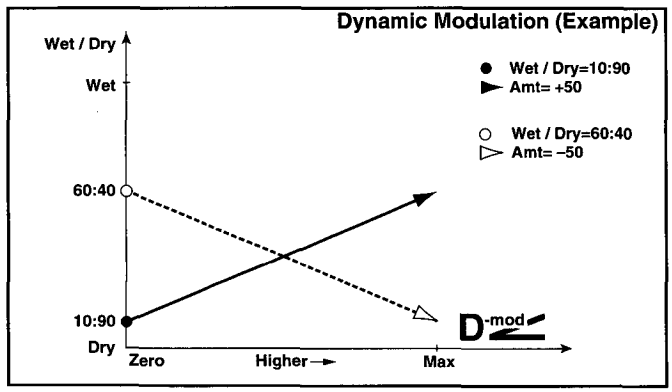
Dynamic Modulation

You can control certain effect parameters using the joystick or ribbon controller of a MIDI keyboard or TRINITY connected to the **TR-Rack** "on the fly." For example, you can use the After Touch effect to speed up the LFO of the chorus and flanger, or you can use the ribbon controller to activate the wah effect. In this way, you will be able to make the most out of the expression created by the effects as part of your instrument.
Most of the parameters with dynamic modulation consist of the parameter value, **Src** (source), and **Amt** (amount). The Src field selects the modulation source, and Amt sets the amount of dynamic modulation effect. When the modulation source is set to the maximum value, the actual degree of the effect will be **the parameter value plus the Amt value**.

MIDI Dynamic modulation of the Program's Insert Effects and Master Effects is controlled via the Global MIDI Channel. Dynamic modulation of the Insert Effects for Combinations and Multi is controlled via the MIDI Channels specified for each Timbre and Track. Dynamic modulation of the Master Effects is controlled via the Global MIDI Channel.

e.x.
Wet/Dry=10:90
Src=AfterT
Amt=+50

In this case, the effect balance is 10:90. As you apply After Touch, the percentage of the effect sound will increase. When After Touch is at its maximum, the effect balance will be 60:40.



If you are controlling the effect parameters using any source other than A.FADE, the dynamic modulation effect will not be affected if you modify the Amt value while the dynamic modulation is being applied. The modification will become effective when you operate the dynamic modulation source again.

Refer to the corresponding effect section for an explanation of other dynamic modulation parameters.
D-mod is marked on the right of the effect parameter table to indicate that the parameter has dynamic modulation.

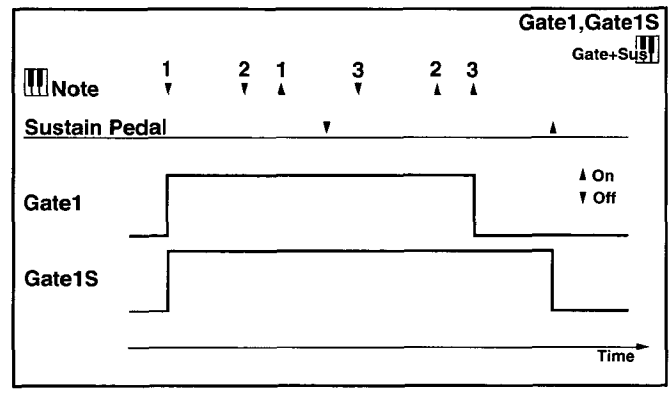
The source names inside the parentheses are the name on the Trinity.

Source	
None	Dynamic modulation is not used.
Gate1	Note On/Off ☞P.11
Gate1S (Gate1+Sus)	Note On + Sustain pedal On/Off ☞P.11
Gate2	Note On/Off (retrigger) ☞P.11
Gate2S (Gate2+Sus)	Note On + Sustain pedal On/Off (retrigger) ☞P.11
NoteNo (Note No.)	Note number.
Vel (Velocity)	Velocity
AfterT (AftrTouch)	Channel After Touch
JS+Y#1 (JS+Y)	Activated when Control Change CC#1 is received.
JS–Y#2 (JS–Y)	Activated when Control Change CC#2 is received.
JS (X)	Joystick - horizontal direction
RbX#16 (RibbonX)	Activated when Control Change CC#16 is received.
RbZ#17 (RibbonZ)	Activated when Control Change CC#17 is received.
SW1#80 (SW1)	Activated when Control Change CC#80 is received.
SW2#81 (SW2)	Activated when Control Change CC#81 is received.

Source	
FSW#82 (Foot SW)	Activated when Control Change CC#82 is received.
Pdl#04 (Foot Pedal)	Activated when Control Change CC#4 is received.
Sus#64 (SustainPdl)	Activated when Control Change CC#64 is received.
Vol#07 (MIDI Vol)	Activated when Control Change CC#7 is received.
Pan#10 (MIDI Pan)	Activated when Control Change CC#10 is received.
Exp#11 (MIDI Exp)	Activated when Control Change CC#11 is received.
FX1#12 (MIDI Cnt1)	Activated when Control Change CC#12 is received.
FX2#13 (MIDI Cnt2)	Activated when Control Change CC#13 is received.
Sld#18 (Slider)	Activated when Control Change CC#18 is received.
CC#19 (MIDI CC#19)	Activated when Control Change CC#19 is received.
Tempo	Tempo information or MIDI clock ☞P.11
A.FADE (AUTOFADE)	Auto Fade (only for some effects) ☞P.12

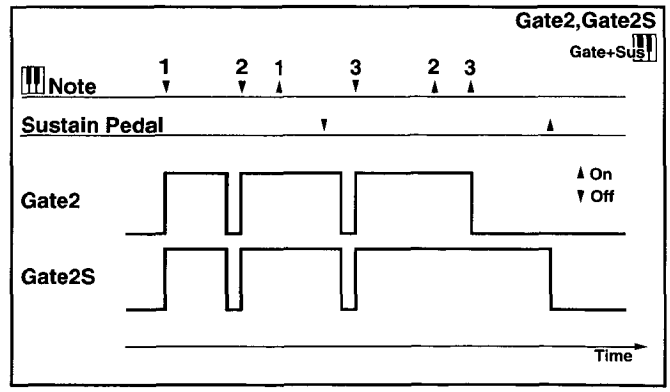
Gate1
Gate1S (Gate1+Sus)

The effect amount is at maximum during Note-on. When you release all the keys, the effect will stop. For Gate1S, the maximum effect level will be maintained as long as you press the sustain pedal, even after you release the keys.



Gate2
Gate2S (Gate2+Sus)

These are almost the same as Gate 1, and Gate1S. However, if you are using this as a source for, say, the EG of size 1, 17: Env.Flanger, or the AUTOFADE of size 2, 13: St.Chorus, every Note On message will trigger the effect. (With Gate 1, and Gate1S, only the first Note On data will trigger the effect.)



Tempo

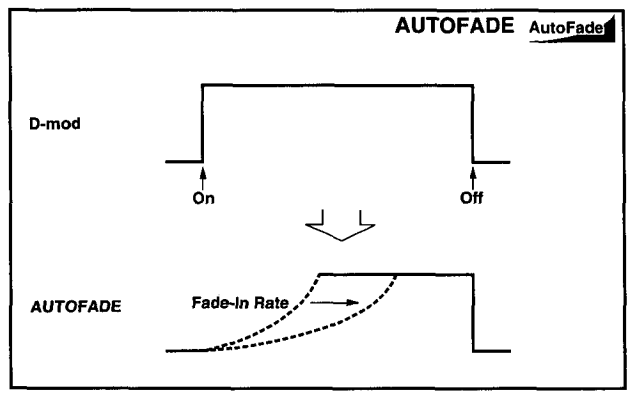
The modulation sources ranging from "NoteNo" to "CC#19" listed on the table on pages 9 and 10 can be controlled via MIDI Control messages 0 through ±127. On the other hand, Tempo information or from the MIDI clock is used as a BPM value for the Tempo. Therefore, a Tempo value of 127 (BPM) will create the same effect as created by the maximum value (+127) of MIDI Control message.

A.FADE (AUTOFADE)

You can use AUTOFADE only for some effects such as size 2, 13: St.Chorus. The effect is triggered by Note On data or the assignable switch. AUTOFADE allows the modulation effect amount to fade in automatically. You cannot select A.FADE as a modulation source for the effects/parameters that do not have the AutoFade function.

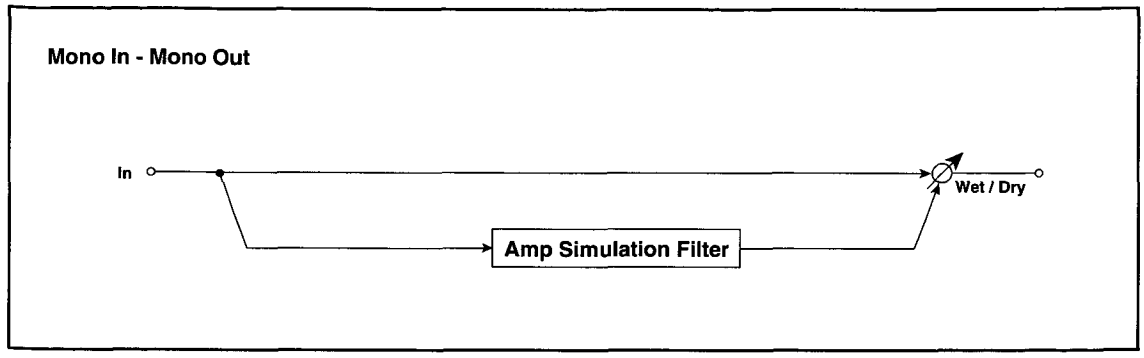
In the parameter table, the AutoFade mark appears to the right of the effect parameters that have the AutoFade function.

MIDI The effect is off when a value for the dynamic modulation source specified for the AUTOFADE Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.



00: AmpSimulation (Amp Simulation)

This effect simulates the frequency response characteristics of guitar amplifiers. You can obtain a realistic guitar amplifier sound. It is also effective for organ sounds.

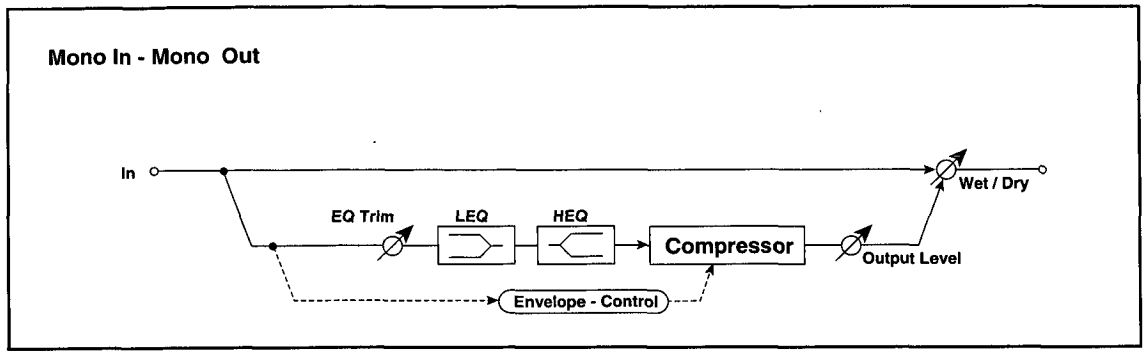


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	−100...+100	Modulation amount of effect balance
b	Amplifier Type	SS, EL84, 6L6	Selects the type of guitar amplifier.

D-mod

01: Compressor

This effect compresses the input signal to regulate the level and give a "punchy" effect. It is useful for guitar, piano, and drum sounds.

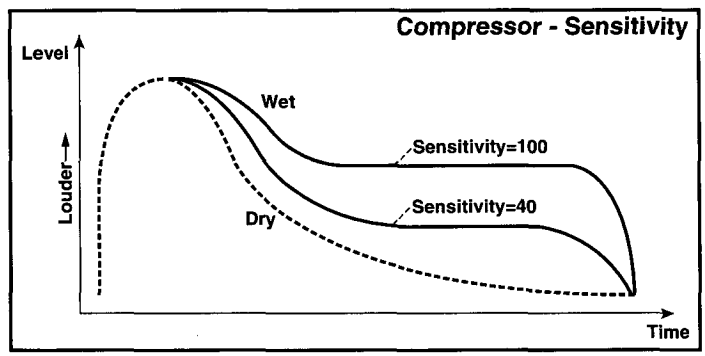


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	−100...+100	Modulation amount of effect balance
b	Sensitivity	1...100	Sets sensitivity. ☞P.14
	Attack	1...100	Sets attack amount. ☞P.14
c	LEQ Gain[dB] (Pre LEQ Gain [dB])	−15.0...+15.0dB	Low EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	−15.0...+15.0dB	High EQ gain
d	EQ Trim	0...100	Equalizer input level
	Ouput Level	0...100	Compressor output level. ☞P.14

D-mod

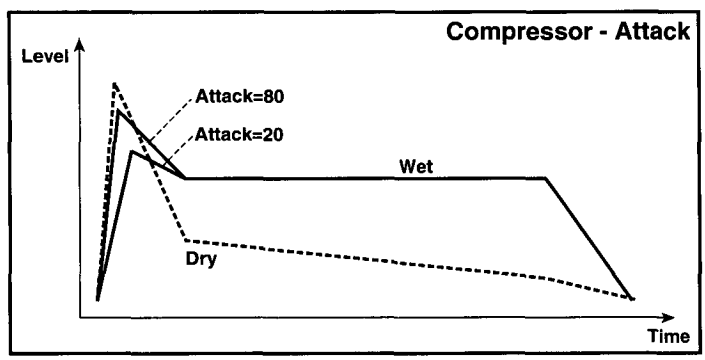
b: Sensitivity
d: Output Level

The "Sensitivity" parameter sets the sensitivity of the compressor. If this parameter is set to a higher value, lower level sounds will be boosted. With a higher Sensitivity, the overall volume level is higher. To adjust the final volume level, use the "Output Level" parameter.



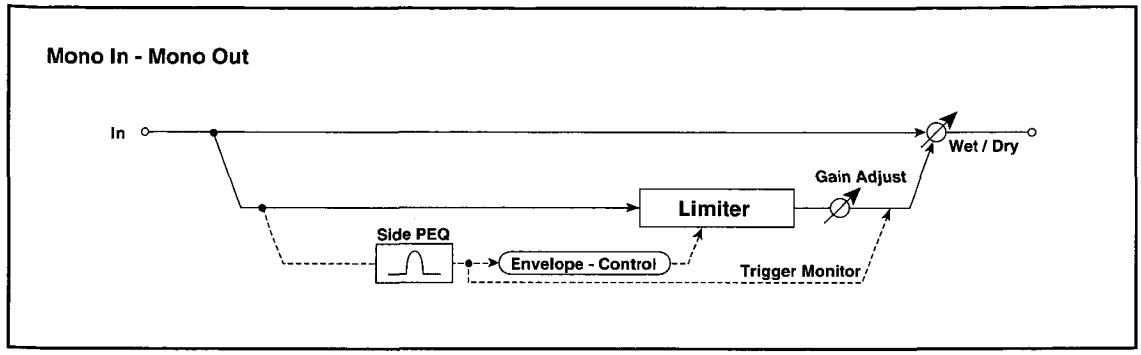
b: Attack

This parameter controls the attack level.



02: Limiter

The Limiter regulates the input signal level. It is similar to the Compressor, except that the Limiter compresses only signals that exceed the specified level to lower unnecessary peak signals. The Limiter applies a peaking-type EQ to the trigger signal (which controls the degree of the Limiter effect), allowing you to set any band width to be covered.



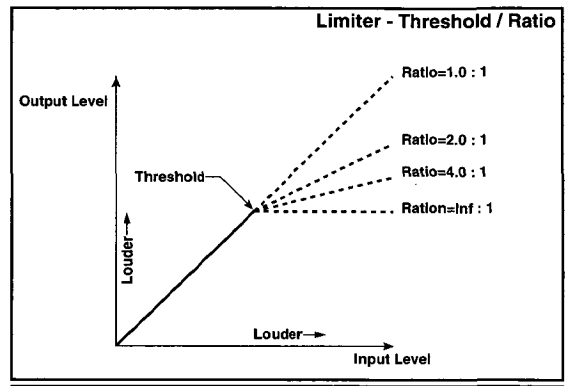
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Ratio	1.0:1...50.0:1, Inf:1	Sets the signal compression ratio. ☞P.15
	Threshold [dB]	–40...0dB	Sets the signal level above which compression is applied. ☞P.15
c	Attack	1...100	Sets attack time. ☞P.16
	Release	1...100	Sets release time. ☞P.16
d	Gain Adjust [dB]	–16...+24dB	Sets output gain. ☞P.15
e	Side PEQ Insert	Off, On	Switches the trigger signal EQ on/off. ☞P.16
	Trigger Monitor	Off, On	Switches effect output/trigger signal monitor on/off. ☞P.16
f	SidePEQ G [dB] (Gain [dB])	–18.0...+18.0dB	Gain of the trigger signal EQ
	Fc [Hz] (Side PEQ Cutoff [Hz])	20...12.00kHz	Center frequency of the trigger signal EQ ☞P.16
	Q	0.5...10.0	Band width of the trigger signal EQ

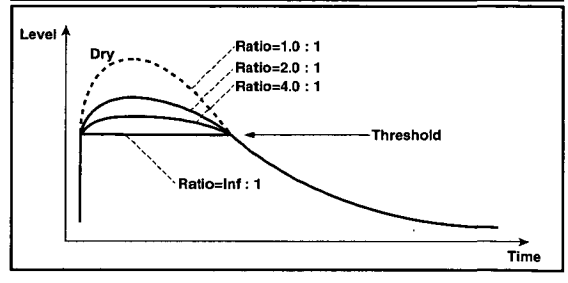
D-mod

b: Ratio
b: Threshold[dB]
d: Gain Adjust[dB]

This parameter sets the signal compression ratio. Compression is applied only when the signal level exceeds the Threshold value.

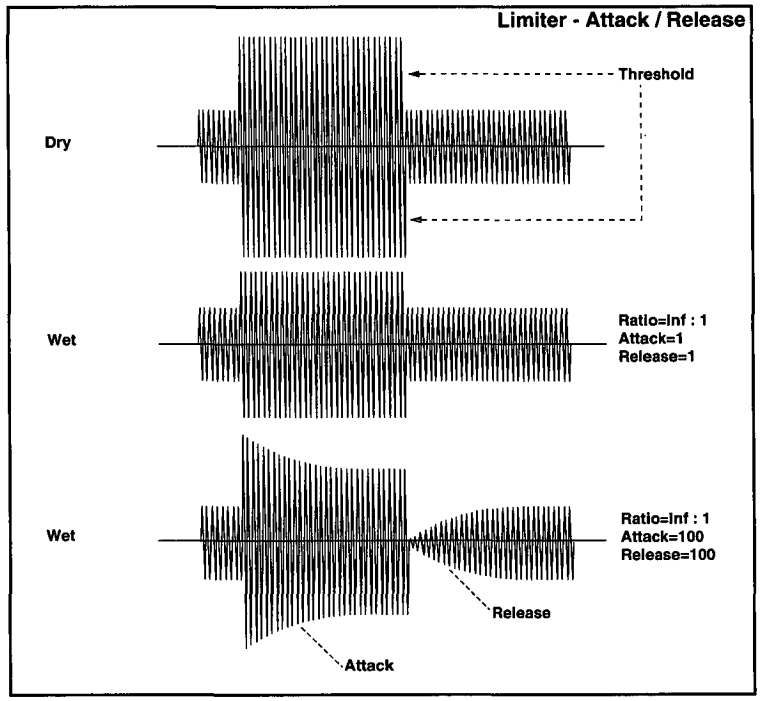
Adjust the output level using the Gain Adjust parameter, since compression causes the entire level to be reduced.





c: Attack
c: Release

These parameters set the attack time and release time. A higher attack time will cause the compression to be applied more slowly.



e: Side PEQ Insert
f: SidePEQ G[dB]
f: Fc[Hz]
f: Q

These parameters are used to set the EQ applied to the trigger signal.

The Limiter determines whether the compression is applied or not, based on the sound post-EQ. Setting the equalizer allows you to set the Limiter to respond to any frequency band.

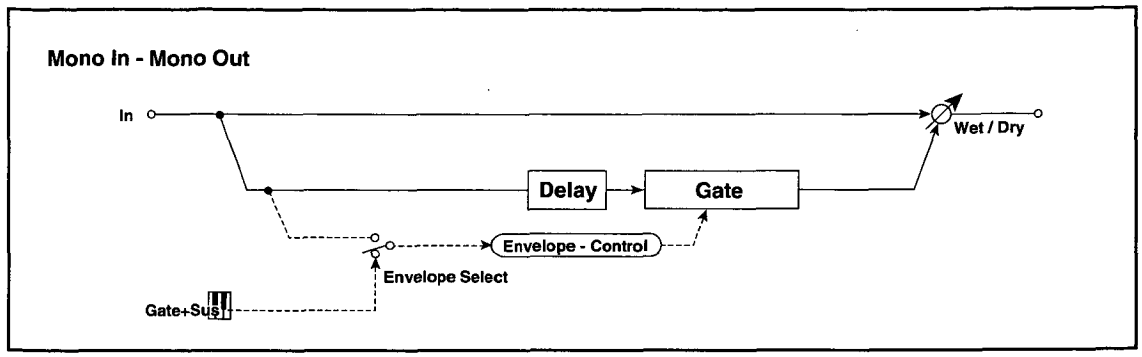
e: Trigger Monitor

Setting this parameter On will cause the trigger signal to be output, instead of the Limiter signal. Use this parameter to check the trigger signal with EQ applied.

Usually, set this to Off.

03: Gate

The Gate effect mutes signals with a level lower than the specified threshold. You can also use this effect to create Gated Reverb by routing it after the Reverb effect. The Gate can be turned on/off directly by Note On/Off.



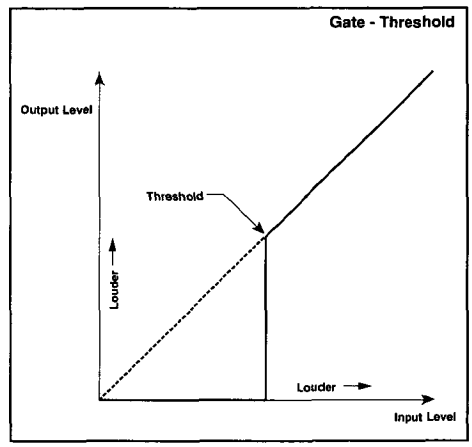
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Envelope Sel (Envelope Select)	D-mod, Input	Toggles between control by Modulation Source and control by input signal. ☞P.17	D-mod
	Src	None...Gate2S (Gate2+Sus)	Modulation Source that controls Gate when Envelope Sel is set to D-mod.	
c	Threshold	0...100	Sets the signal level below which Gate is applied. ☞P.17	
	Delay Time[ms] (Delay Time [msec])	0...100msec	Delay time for gate input ☞P.17	
d	Attack	1...100	Sets attack time. ☞P.17	
	Release	1...100	Sets release time. ☞P.17	

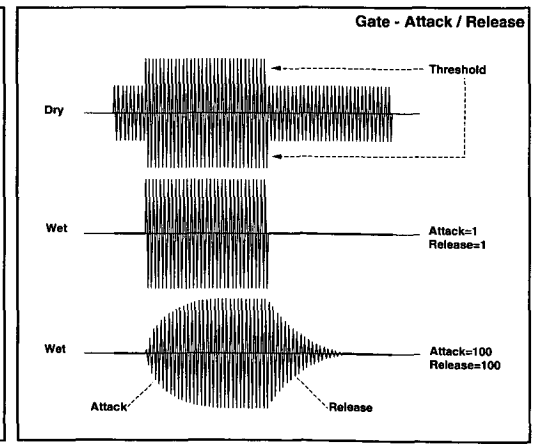
b: Envelope Sel
b: Src

The Envelope Sel parameter determines whether the Gate is on/off based on the level of input signal or by using a modulation source. The Src parameter is available only when you have selected D-mod for the Envelope Sel parameter. Selection ranges from None to Gate2S.

c: Threshold
d: Attack
d: Release

This parameter sets the signal level below which Gate is applied when Envelope Sel is set to Input.
The Attack and Release parameters set the Gate attack time and release time.



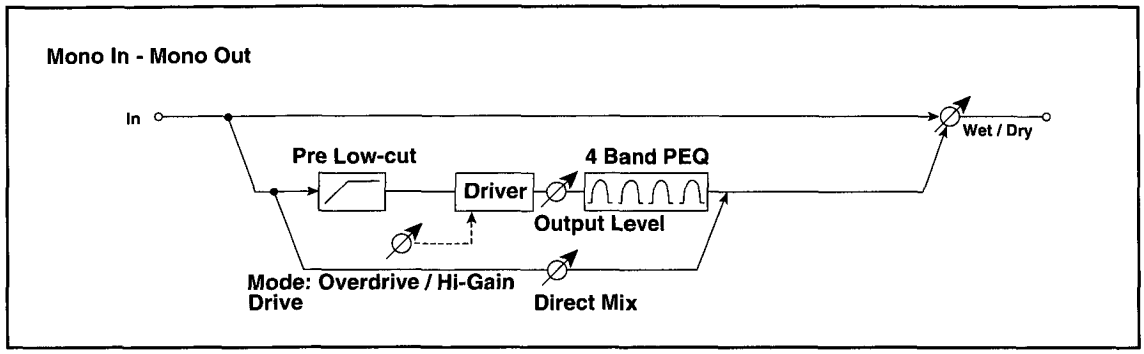


c: Delay Time[ms]

This parameter sets the delay time of the Gate input. If the sound has a very fast attack, increase the delay time so that the signal will be input after the Gate is opened. This will preserve the attack part of the sound.

04: OD/Hi-Gain (Overdrive/Hi-Gain)

This distortion effect utilizes an Overdrive mode and a Hi-Gain mode. Controlling the 4-band EQ will allow you to create versatile distortion sounds. This effect is suitable for guitar and organ sounds.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Mode	Overdrive, Hi-Gain	Switches between overdrive and hi-gain distortions.	
	Drive	0...100	Sets the degree of distortion.	☞P.18
c	Output Level	0...50	Sets the output level.	☞P.18
	Pre Low-cut	0...10	Amount of cut in low range at the distortion input.	☞P.18
d	Band1 Fc[Hz] (Band1 Cutoff [Hz])	20...1.0kHz	Center frequency of EQ band 1	
	Gain[dB]	−18...+18dB	Band 1 gain	
	Q	0.5...10.0	Band 1 bandwidth	☞P.18
e	Band2 Fc[Hz] (Band2 Cutoff [Hz])	50...5.00kHz	Band 2 center frequency	
	Gain[dB]	−18...+18dB	Band 2 gain	
	Q	0.5...10.0	Band 2 bandwidth	☞P.18
f	Band3 Fc[Hz] (Band3 Cutoff [Hz])	300...10.00kHz	Band 3 center frequency	
	Gain[dB]	−18...+18dB	Band 3 gain	
	Q	0.5...10.0	Band 3 bandwidth	☞P.18
g	Band4 Fc[Hz] (Band4 Cutoff [Hz])	500...20.00kHz	Band 4 center frequency	
	Gain[dB]	−18...+18dB	Band 4 gain	
	Q	0.5...10.0	Band 4 bandwidth	☞P.18
h	Direct Mix	0...50	Mix amount of dry sound routed to Distortion	

D-mod

b: Drive
c: Output Level

The degree of distortion is determined by the level of input signal and the setting of Drive. Raising the Drive setting will cause the entire volume level to increase. Use the Output Level parameter to adjust the volume level. The Output Level parameter uses the signal level input to the 4-Band EQ. If clipping occurs at the 4-Band EQ, adjust the Output Level parameter.

c: Pre Low-cut

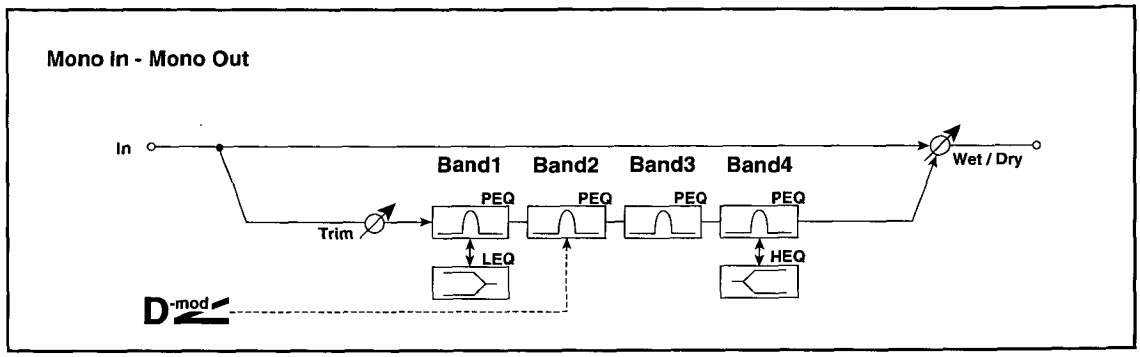
Cutting the signal in the low range before it is input to the Distortion will create a sharp distortion.

d: Q
e: Q
f: Q
g: Q

These parameters set the bandwidth of each band filter. The higher the value, the narrower the band becomes.

05: Parametric4EQ (Parametric 4EQ)

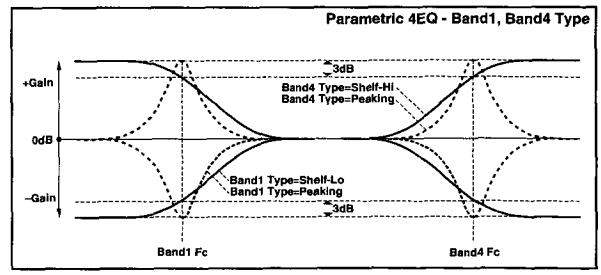
This effect is a four-band parametric equalizer. You can select either a peaking type or a shelving type for Band 1 and 4. Band 2 allows for gain control via dynamic modulation.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Balance between the effect sound and dry sound.
b	Band1 Type	Peaking, Shelf-Lo (Shelving-Low)	Selects Band 1 type. ☞P.19
	Band4 Type	Peaking, Shelf-Hi (Shelving-High)	Selects Band 4 type. ☞P.19
c	Band1 Fc[Hz] (Band1 Cutoff [Hz])	20...1.0kHz	Sets the Band 1 center frequency.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the Band 1 gain.
	Q	0.5...10.0	Sets the Band 1 bandwidth. ☞P.18
d	Band2 Fc[Hz] (Band2 Cutoff [Hz])	50...10.00kHz	Sets the Band 2 center frequency.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the Band 2 gain. ☞P.19 D-mod
	Q	0.5...10.0	Sets the Band 2 bandwidth. ☞P.18
e	Band3 Fc[Hz] (Band3 Cutoff [Hz])	300...10.00kHz	Sets the Band 3 center frequency.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the Band 3 gain.
	Q	0.5...10.0	Sets the Band 3 bandwidth. ☞P.18
f	Band4 Fc[Hz] (Band4 Cutoff [Hz])	500...20.00kHz	Sets the Band 4 center frequency.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the Band 4 gain.
	Q	0.5...10.0	Sets the Band 4 bandwidth. ☞P.18
g	Trim	0...100	Sets the input level.
h	Band2 Src (Band2 Dynamic Gain Src)	None...Tempo	Modulation source for Band 2 gain ☞P.19
	Gain Amt[dB] (Amt [dB])	−18.0...+18.0dB	Amount of Band 2 gain modulation

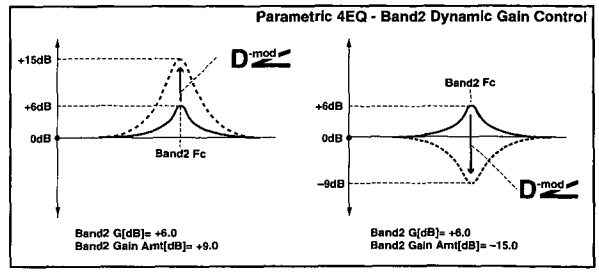
b: Band1 Type
b: Band4 Type

Selects a filter type for Band 1 and 4.



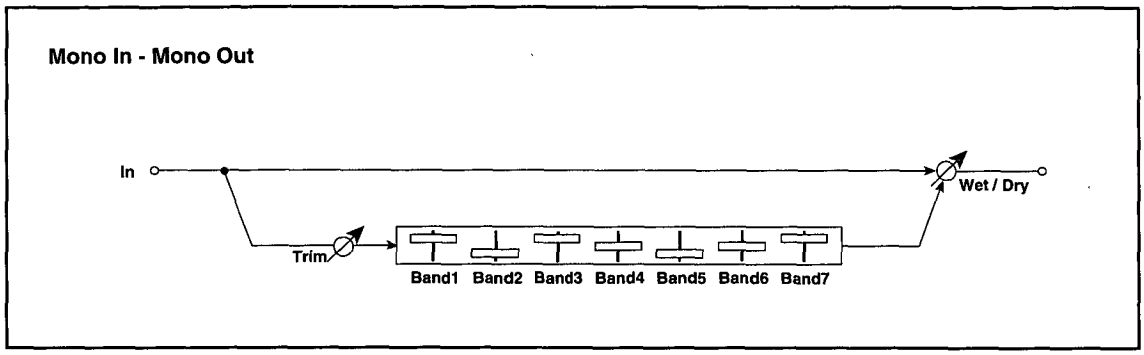
d: G[dB]
h: Band2 Src
h: Gain Amt[dB]

You can control the gain of Band 2 using the modulation source.



06: Graphic 7EQ (Graphic 7Band EQ)

This effect is a seven-band graphic equalizer. You can select a center frequency setting for each band from twelve types, according to the sound.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Type	1:Wide 1 2:Wide 2 3:Wide 3 4:Half Wide 1 5:Half Wide 2 6:Half Wide 3 7:Low 8:Wide Low 9:Mid 10:Wide Mid 11:High 12:Wide High	Selects a combination of center frequencies for each band. ☞P.20
	Trim	0...100	Sets the input level.
c	B1[dB] (Band1 [dB])	–18.0...+18.0dB	Sets Band 1 gain.
	B2[dB] (Band2 [dB])	–18.0...+18.0dB	Sets Band 2 gain.
d	B3[dB] (Band3 [dB])	–18.0...+18.0dB	Sets Band 3 gain.
	B4[dB] (Band4 [dB])	–18.0...+18.0dB	Sets Band 4 gain.
e	B5[dB] (Band5 [dB])	–18.0...+18.0dB	Sets Band 5 gain.
	B6[dB] (Band6 [dB])	–18.0...+18.0dB	Sets Band 6 gain.
f	B7[dB] (Band7 [dB])	–18.0...+18.0dB	Sets Band 7 gain.

D-mod

b: Type

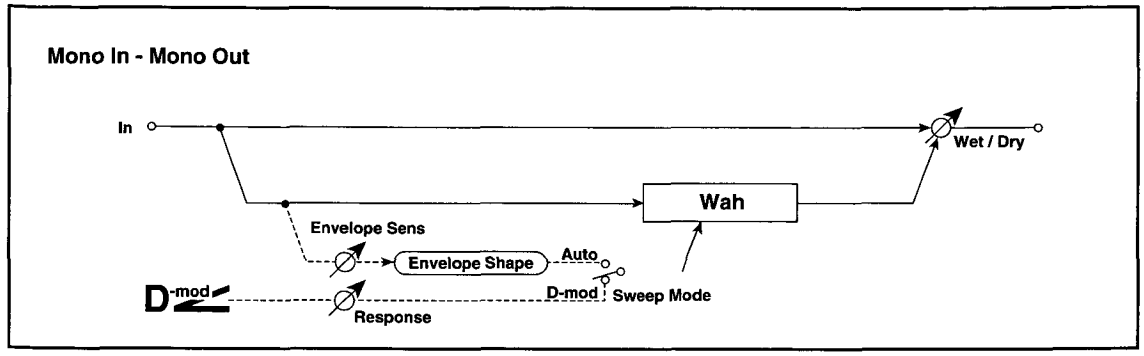
This parameter selects a combination of center frequencies for each band. Each center frequency is shown on the right edge of the LCD.

You can configure a 21-Band Graphic EQ ranging from 80Hz to 18kHz if you route three Graphic 7EQ effects in series, with a setting of 7: Low, 9: Mid, and 11: High for each EQ.

size1

07: Wah/Auto Wah

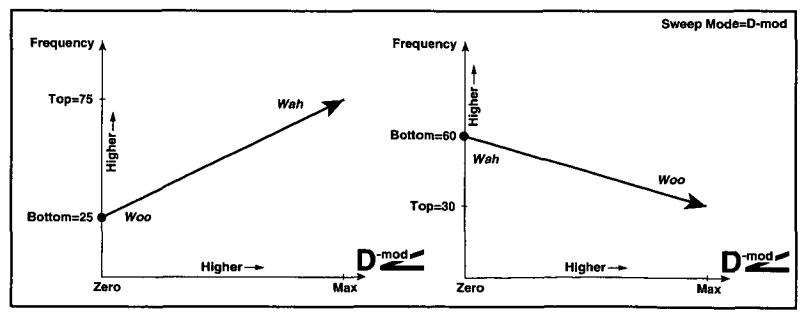
This wah effect allows you to create sounds from vintage wah pedal simulation to auto-wah simulation, and much broader range settings. You can select Band Pass or Low Pass for the wah filter.

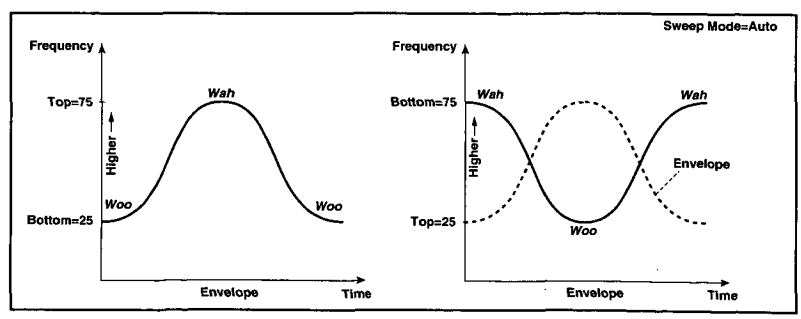


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Freq. Top (Frequency Top)	0...100	Sets the upper limit of the wah center frequency. ☞P.21	
	Freq. Bottom (Frequency Bottom)	0...100	Sets the lower limit of the wah center frequency. ☞P.21	
c	Resonance	0...100	Sets the resonance amount.	
	Filter Mode	BandPass, Low Pass	Selects the wah filter type.	
d	Sweep Mode	Auto, D-mod	Switches between auto-wah control and modulation source. ☞P.22	D-mod
	Src	None...Tempo	Modulation source used to control wah when Sweep Mode is set to D-mod.	
	Respon (Response)	0...10	How quickly the wah effect responds to dynamic modulation.	
e	Envelope Sens	0...100	Sets the sensitivity of auto-wah. ☞P.22	
	Envelope Shape	−100...+100	Sets the sweep curve of auto-wah. ☞P.22	

b: Freq. Top
b: Freq. Bottom

The sweep width and direction of the wah filter are determined by the Freq. Bottom and Freq. Top settings.





d: Sweep Mode

This parameter changes the wah control mode. Setting Sweep Mode to Auto will select an auto-wah that sweeps according to envelope changes in the input signal level. Auto-wah is frequently used for funk guitar parts and clav sounds.

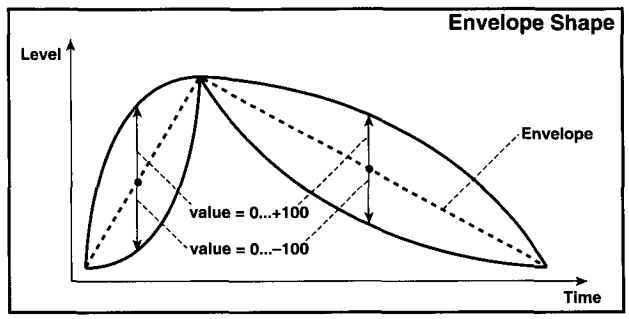
When Sweep Mode is set to D-mod, you can control the filter directly via the modulation source in the same way as a wah pedal.

e: Envelope Sens

This parameter sets the sensitivity of auto-wah. Increase the value if the input signal is too low to sweep. Reduce the value if the input signal is so high that the filter is stopped temporarily.

e: Envelope Shape

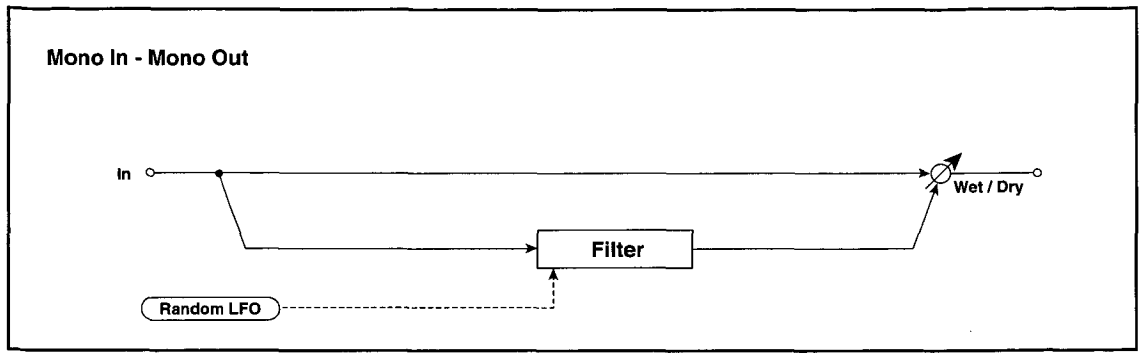
This parameter determines the sweep curve for auto-wah.



size1

08: Random Filter

The filter frequency changes randomly. You can create a special effect from filter oscillation.

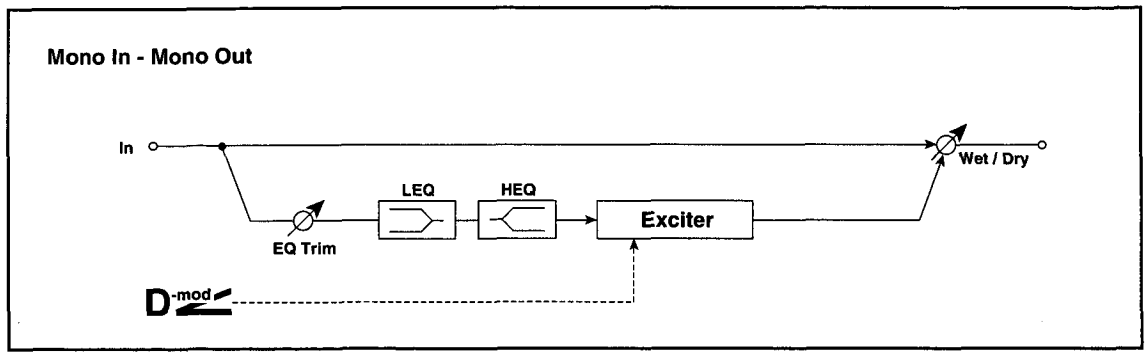


a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Cutoff	0...100	Filter center frequency	
	Resonance	0...100	Sets the resonance amount.	
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.05...50.00Hz	Speed of LFO that modulates the filter	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–50.00...+50.00Hz	Modulation amount of LFO speed	
d	Depth	0...100	Modulation depth of filter center frequency	D-mod
	Src	None...Tempo	Modulation source of filter modulation	
	Amt	–100...+100	Modulation amount of filter modulation	

a: Wet/Dry The effect sound's phase will be reversed when you set this parameter in the range of values from –Wet to –1:99.

09: Dyna Exciter

This effect gives a frame to a sound and emphasizes the outline. You can control the intensity of the effect using dynamic modulation.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Blend	–100...+100	Sets the intensity (depth) of the Exciter effect. ☞P.24	D-mod
	Src	None...Tempo	Modulation source of the Exciter intensity	
	Amt	–100...+100	Modulation amount of the Exciter intensity	
c	Emphatic Point	0...140	Sets the frequency to be emphasized. ☞P.24	D-mod
	Src	None...Tempo	Modulation source of the frequency to be emphasized	
	Amt	–100...+100	Modulation amount of the frequency to be emphasized	
d	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High EQ gain	
e	EQ Trim	0...100	2-band EQ input level	

b: Blend

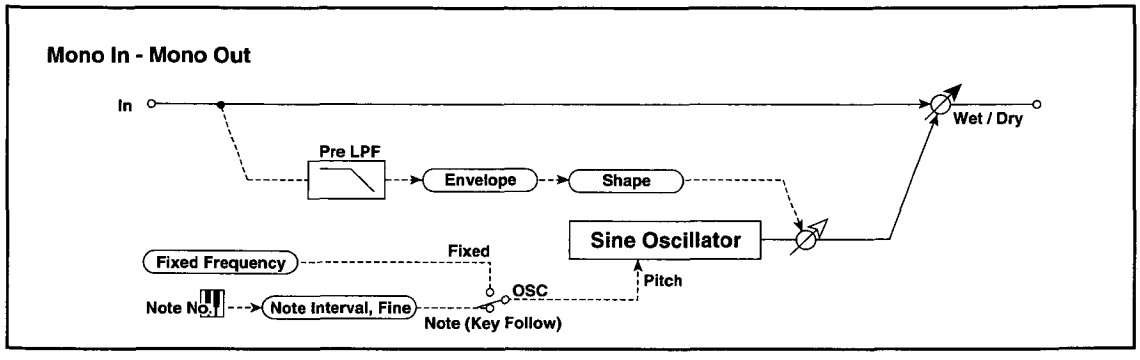
This parameter sets the depth (intensity) of the Exciter effect. Positive values give a frequency pattern (to be emphasized) different from negative values.

c: Emphatic Point

This parameter sets the frequency to be emphasized. Higher values will emphasize lower frequencies.

10: SubOscillator (Sub Oscillator)

This effect adds very low frequencies to the input signal. It is very useful when simulating a roaring drum sound or emphasizing powerful low range harmonics. You can also adjust the oscillator frequency to match a particular note number, for use as an octaver.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	OSC (OSC Mode)	Note(Key Follow), Fixed	Determines whether the oscillator frequency follows the note number or whether it is fixed. ☞P.25	
c	Note Interval	–48...0	When OSC = Note(Key Follow), this parameter sets the pitch difference from the note number. ☞P.25	
	Note Fine	–100...+100	Fine adjustment of the oscillator frequency. ☞P.25	
d	FixedFreq[Hz] (Fixed Frequency [Hz])	10.0...80.0Hz	When OSC = Fixed, this parameter sets the oscillator frequency. ☞P.25	D-mod
	Src	None...Tempo	Oscillator frequency modulation source when OSC = Fixed.	
	A (Amt)	–80.0...+80.0Hz	Oscillator frequency modulation amount when OSC = Fixed.	
e	Envelope PreLPF (Envelope Pre LPF)	1...100	The upper limit of the frequency range for which very low harmonics are added. ☞P.25	
	Envelope Sens	0...100	Sets the sensitivity with which very low harmonics are added.	
f	Envelope Shape	–100...+100	Sets the oscillator's volume envelope curve.	

b: OSC
c: Note Interval
c: Note Fine

The OSC parameter selects the oscillator operation mode. When Note(Key Follow) is selected, the oscillator's frequency is determined based on the note number, allowing you to use it as an octaver. The Note Interval parameter sets the pitch offset from the original note number by semitone steps. The Note Fine parameter allows you to fine-tune in steps of cents.

d: FixedFreq[Hz]

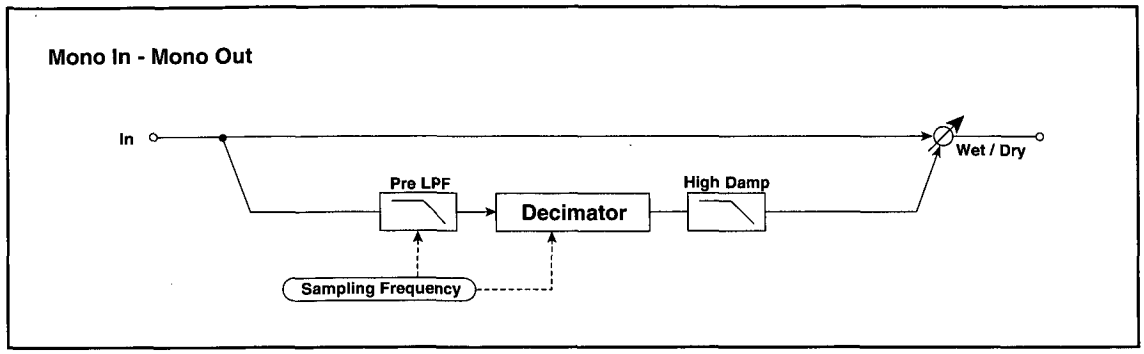
The Fixed Frequency parameter sets the frequency when you select "Fixed" for the OSC parameter.

e: Envelope PreLPF

This parameter sets the upper limit of the frequency range to which very low harmonics are added. Adjust this parameter if you do not want to add lower harmonics to the higher range. For example, you can create a nice effect by adding very low harmonics only to the bass drum sound, not to the snare sound.

11: Decimator

This effect creates a rough sound like a cheap sampler by lowering the sampling frequency. You can also simulate noise unique to a sampler (aliasing).



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	SamplFrq[Hz] (Sampling Freq [Hz])	1.00k...24.00kHz	Sets the sampling frequency.	D-mod
	Src	None...Tempo	Sets the modulation source of the sampling frequency.	
	A (Amt)	–24.00k...+24.00kHz	Sets the modulation amount of the sampling frequency.	
c	Pre LPF	Off, On	Selects whether the harmonic noise caused by decrease in sampling frequency is generated or not. ☞P.26	
	High Damp[%]	0...100%	Ratio of cut of the high range	

c: Pre LPF

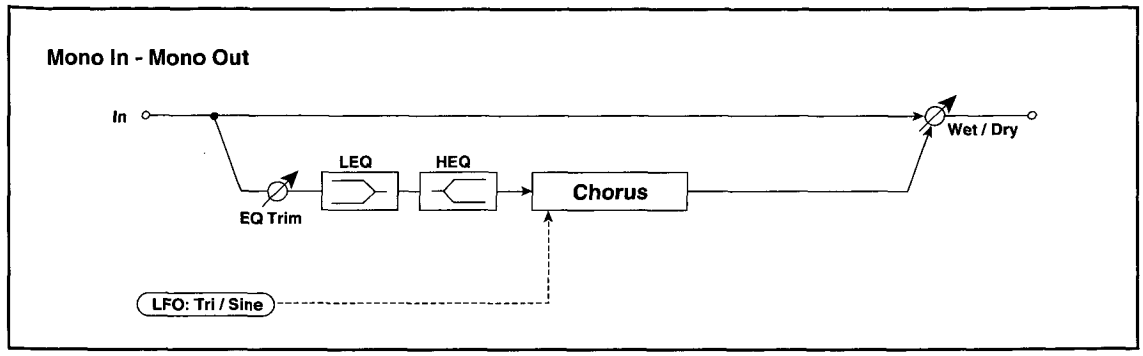
If you input a sound containing high frequencies (that cannot be sampled) to a sampler with a low sampling frequency, a noise with a pitch unrelated to the original sound will be generated. When Pre LPF = ON, this type of noise will not be generated.

You can create a sound similar to a ring modulator if you set Pre LPF to OFF, with a SamplFreq of 3kHz.

size1

12: Chorus

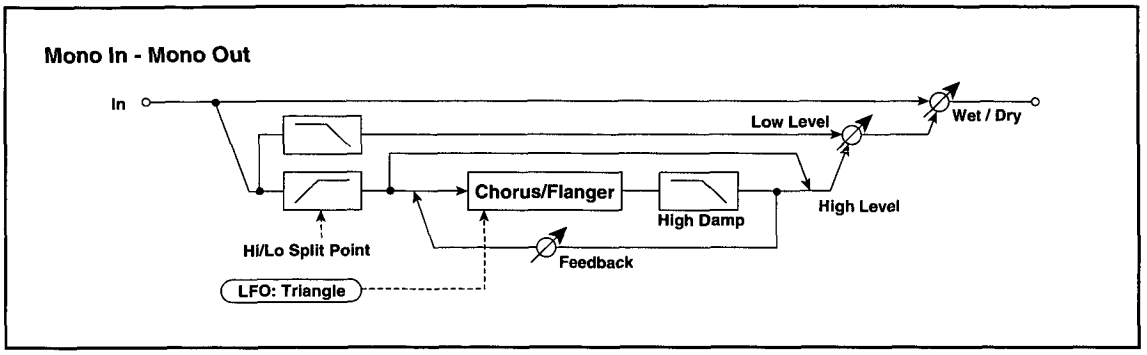
This effect adds thickness and warmth to the sound by modulating the delay time of the input signal.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Pre Delay[ms] (Pre Delay [msec])	0.0...50.0msec	Delay from the original sound	
	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
d	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation amount of the LFO modulation depth	
e	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low-EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High-EQ gain	
f	EQ Trim	0...100	EQ input level	

13: HarmnicChorus (Harmonic Chorus)

This effect applies chorus only to higher frequencies. This can be used to apply a chorus effect to a bass sound without making the sound thinner. You can also use this chorus block with feedback as a flanger.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Hi/LoSplitPoint (High/Low Split Point)	1...100	Frequency split point between the high and low range ☞P.28	
	Pre Delay[ms] (Pre delay [msec])	0.0...50.0msec	Delay from the original sound	
c	High Level	0...100	Output level in the high range (chorus)	
	Low Level	0...100	Output level in the low range	
d	LFO Freq[Hz] (LFO frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation amount of the LFO modulation depth	
f	Feedback	–100...+100	Feedback amount of the chorus block ☞P.28	
	High Damp[%]	0...100%	Chorus block damping amount in the high range	

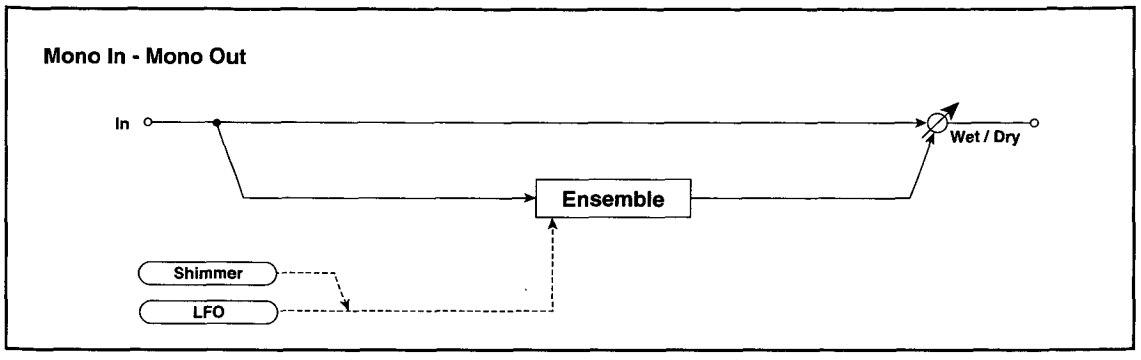
b: Hi/LoSplitPoint This parameter sets the frequency that splits the high and low range. Only the high range will be sent to the chorus block.

f: Feedback Sets the feedback amount of the chorus block. Increasing the feedback will allow you to use the effect as a flanger.

size1

14: Ensemble

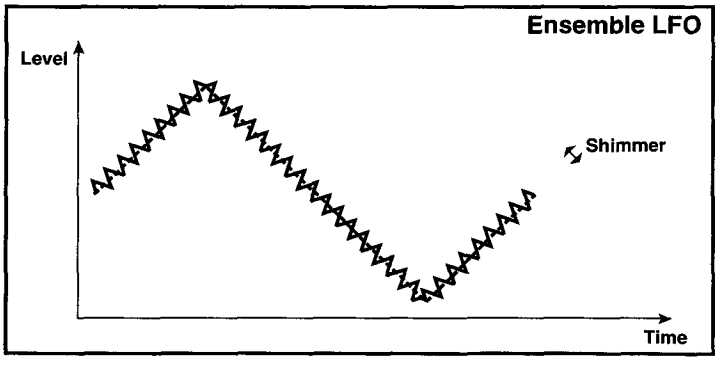
This chorus effect is created by a subtle shimmering LFO, and adds richness and thickness to the sound. It is most effective on the string sounds.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Speed	1...100	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	Amt	–100...+100	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation amount of the LFO modulation depth	
d	Shimmer	0...100	Amount of shimmering of the LFO waveform ☞P.29	

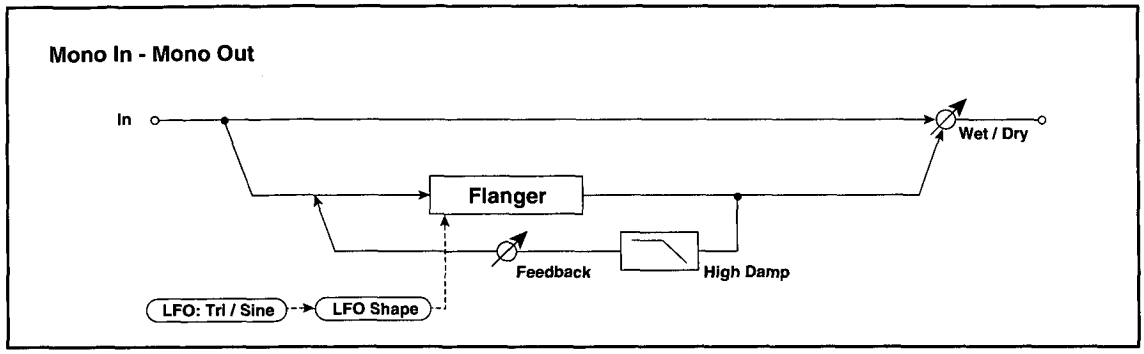
d: Shimmer

This parameter sets the amount of shimmering of the LFO waveform. Increasing this value makes more shimmering, making the chorus effect more complex and richer.



15: Flanger

This effect gives a significant swell and movement of pitch to the sound. It is more effective when applied to a sound with a lot of harmonics, such as cymbals or electric guitar sounds.



a	*Wet/Dry*	*–Wet...–1:99, Dry, 1:99...Wet*	*Sets the balance between the effect and dry sounds.* ☞P.23, 30	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay from the original sound	
	Depth	0...100	Depth of LFO modulation	
c	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Waveform	Tri (Triangle), Sine	Selects the LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	

a: Wet/Dry
c: Feedback

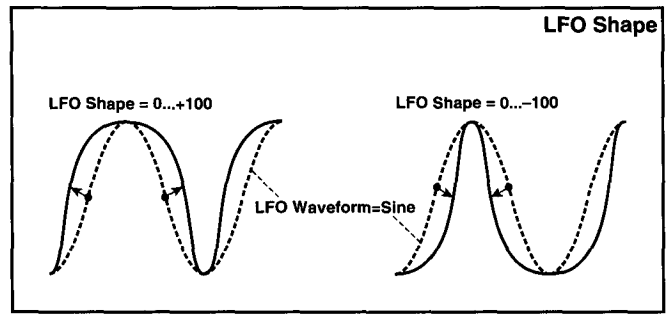
The peak shape of the positive and negative Feedback value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound if you set a positive value for both Feedback and Wet/Dry, and if you set a negative value for both Feedback and Wet/Dry.

c: High Damp[%]

This parameter sets the amount of damping of the feedback in the high range. Increasing the value will cut high-range harmonics.

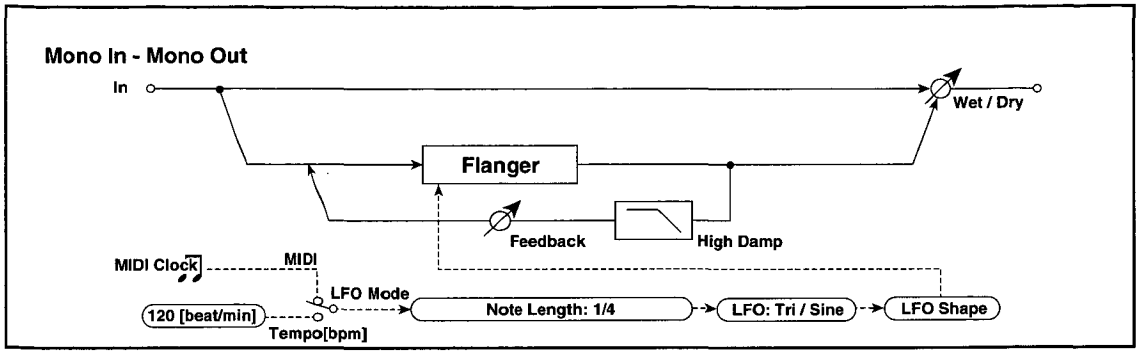
e: LFO Shape

Changing the LFO waveform shape controls the peak sweep of flanging effects.



16: Tempo Flanger

This Flanger allows you to match the LFO cycle with a song's tempo. For example, you can apply the Flanger synchronizing to a sequencer rhythm pattern, or you can input a tempo before a live performance so that the flanging effect will match the song tempo. The LFO cycle can be set in steps of one note.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 30
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay from the original sound
	Depth	0...100	Depth of LFO modulation
c	Feedback	–100...+100	Feedback amount ☞P.30
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30
d	LFO Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.31
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.31
e	Note Length (Length)	1...16/1...16	Sets the LFO cycle. LFO Cycle = Note Length x Whole Note. ☞P.31
f	LFO Waveform	Tri (Triangle), Sine	Selects the LFO waveform.
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30

D-mod

d: LFO Mode

This parameter selects the LFO operation mode. When Tempo is selected, the LFO refers to the value set in Tempo[bpm]. When MIDI is selected, the LFO will synchronize to the MIDI clock sent from a connected MIDI device. This is useful for performance using a sequencer.

d: Tempo[bpm]

This parameter sets the tempo when Tempo[bpm] is selected for the LFO Mode.

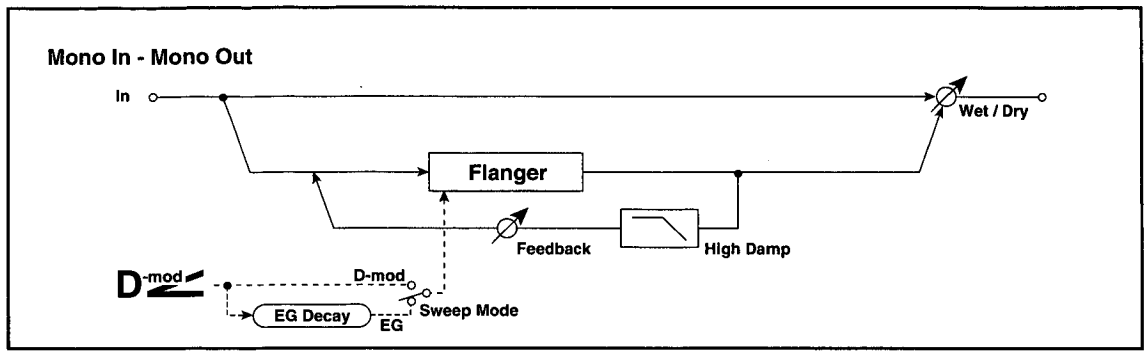
e: Note Length

These parameters set the LFO cycle. The cycle is calculated by multiplying the length of a whole note by the value of Note Length.

For example, when Note Length is set to 1/4, the Flanger will sweep at an interval of one quarter note.

17: Env.Flanger (Envelope Flanger)

This Flanger uses an envelope generator for modulation. You will obtain the same pattern of flanging each time you play. You can also control the Flanger directly using the modulation source.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 30	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Top[ms] (Delay Top [msec])	0.0...50.0msec	Sets the higher limit of Delay Time. ☞P.21	
	Delay Btm[ms] (Delay Bottom [msec])	0.0...50.0msec	Sets the lower limit of Delay Time. ☞P.21	
c	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
d	Sweep Mode	EG, D-mod	Determines whether the flanger is controled by the envelope generator or by the modulation source. ☞P.32	D-mod
	Src	None...Tempo	Modulation source that triggers the EG (when EG is selected for Sweep Mode), or modulation source that causes the flanger to sweep (when D-mod is selected for Sweep Mode).	
e	EG Decay	1...100	Sets the EG decay speed. ☞P.32	

d: Sweep Mode
d: Src

This parameter switches the flanger control mode. With Sweep Mode = EG, the flanger will sweep using the envelope generator. This envelope generator is included in the envelope flanger, and not related to the Oscillator EG, Filter EG, or Amp EG.

The Src parameter selects the source that starts the envelope generator. If you select, for example, Gate, the envelope generator will start when the note-on message is received.

When Sweep Mode = D-mod, the modulation source can control the flanger directly. Select the modulation source using the Src parameter.

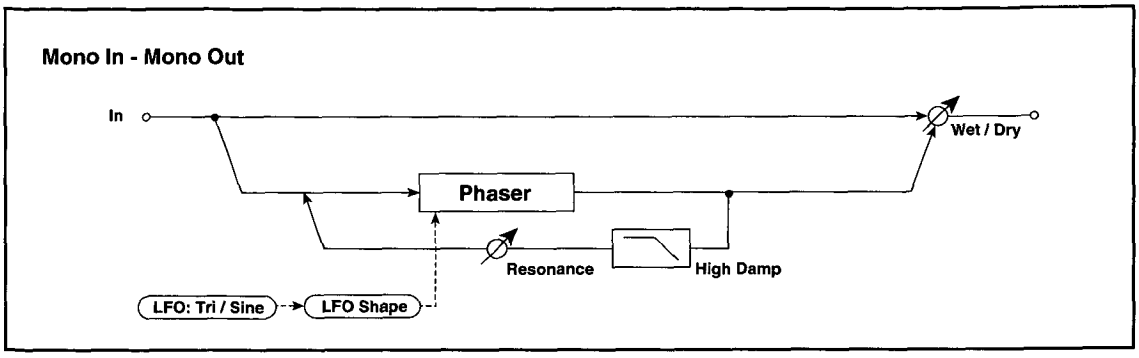
MIDI The effect is off when a value for the modulation source specified for the Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Envelope Generator is triggered when the value changes from 63 or smaller to 64 or higher.

e: EG Decay

Decay speed is the only adjustable parameter on this EG.

18: Phaser

This effect creates a swell by shifting the phase. It is very effective on electric piano sounds.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 33	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual	0...100	Sets the frequency to which the effect is applied.	
	Depth	0...100	Depth of LFO modulation	
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33	
	High Damp[%]	0...100%	Resonance damping amount in the high range ☞P.33	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Waveform	Tri (Triangle), Sine	Selects the LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform shape is changed. ☞P.30	

a: Wet/Dry
c: Resonance

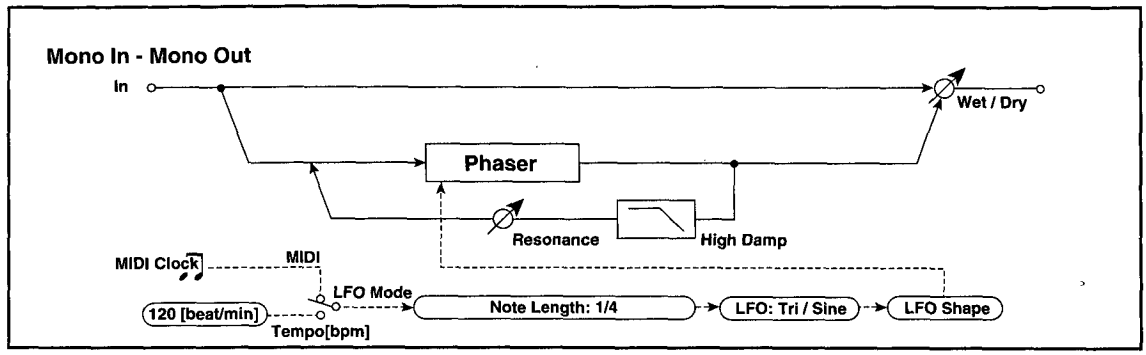
The peak shape of the positive and negative Feedback value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound, if you set a positive value for both Resonance and Wet/Dry, and if you set a negative value for both Resonance and Wet/Dry.

c: High Damp[%]

This parameter sets the amount of damping of the resonance in the high range. Increasing the value will cut high-range harmonics.

19: Tempo Phaser

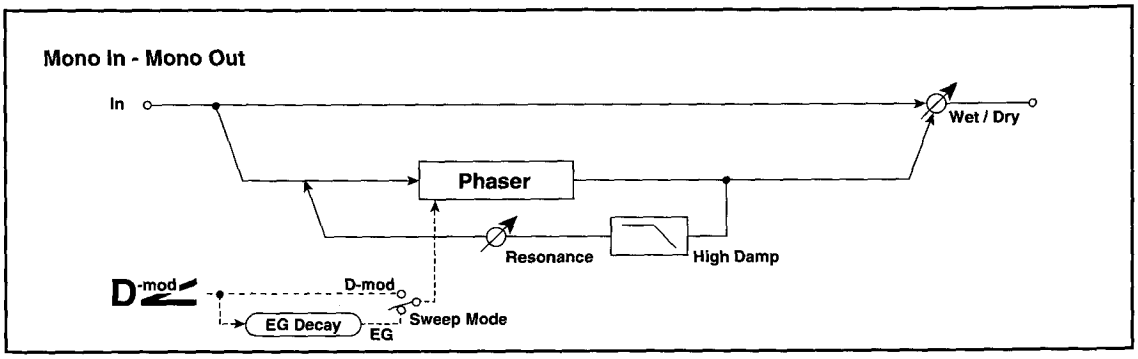
This Phaser allows you to match the LFO cycle with the song tempo. For example, you can synchronize the Phaser to a sequencer rhythm pattern, or you can input a tempo before a live performance so that the phasing effect will match the song tempo.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 33	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual	0...100	Sets the frequency to which the effect is applied.	
	Depth	0...100	Depth of LFO modulation	
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33	
	High Damp[%]	0...100%	Sets the resonance damping amount in the high range. ☞P.33	
d	LFO Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.31	
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.31	
e	Note Length (Length)	1...16/1...16	Sets the LFO cycle. LFO Cycle = Note Length x Whole Note. ☞P.31	
f	LFO Waveform	Tri (Triangle), Sine	Selects the LFO waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	

20: Env.Phaser (Envelope Phaser)

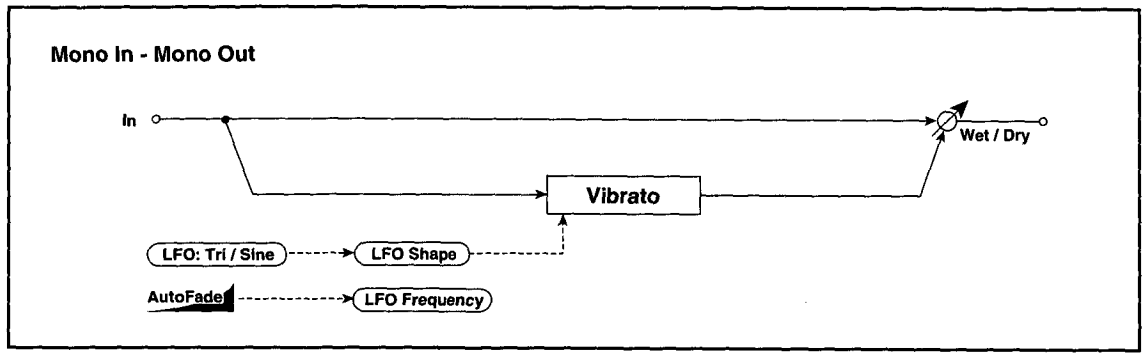
This Phaser uses an envelope generator for modulation. You will obtain the same pattern of phasing each time you play. You can also control the Phaser directly using the modulation source.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 33	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual Top (Manu Top)	0...100	Sets the higher limit of the frequency range to which the effect is applied. ☞P.21	
	Manual Bottom (Manu Bottom)	0...100	Sets the lower limit of the frequency range to which the effect is applied. ☞P.21	
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33	
	High Damp[%]	0...100%	Sets the resonance damping amount in the high range. ☞P.33	
d	Sweep Mode	EG, D-mod	Determines whether the phaser is controlled by the envelope generator or by the modulation source. ☞P.32	D-mod
	Src	None...Tempo	Modulation source that triggers the EG (when EG is selected for Sweep Mode), or modulation source that causes the phaser to sweep (when D-mod is selected for Sweep Mode).	
e	EG Decay	1...100	Sets the EG decay speed. ☞P.32	

21: Vibrato

This effect causes the pitch of the input signal to shimmer. Using the AutoFade allows you to increase or decrease the shimmering speed.

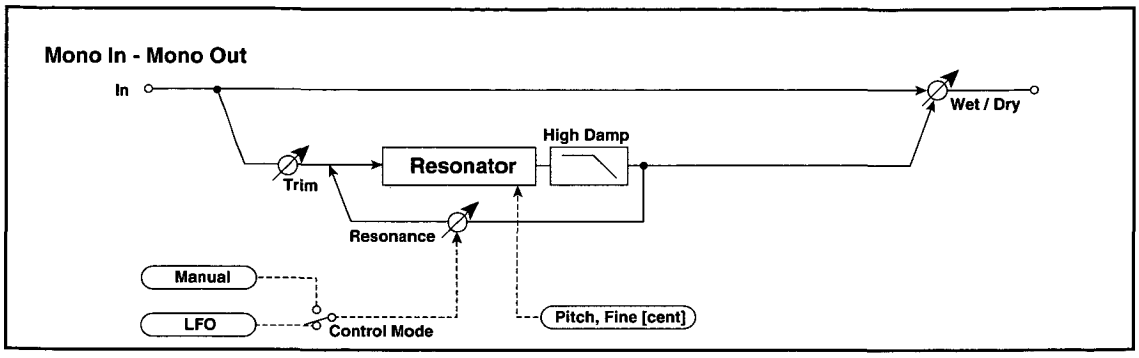


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...A.FADE (AUTOFADE)	Modulation source of LFO speed. AutoFade is available.	AutoFade
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation depth of the LFO modulation depth	
d	LFO Waveform	Tri (Triangle), Sine	Selects the LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform shape is changed. ☞P.30	
e	AUTOFADE Src	None...Tempo	Sets the modulation source that starts AutoFade. ☞P.71	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

size1

22: Resonator

This effect resonates the input signal at a specified pitch. For example, the Resonator will add a unique character to a string sound by emphasizing certain harmonics, or give a "pitch" to a drum sound. You can control the resonance intensity via an LFO.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Pitch	C0...B8	Pitch for resonance ☞P.37
	Fine[cent]	–50...+50cent	Fine adjustment of pitch for resonance ☞P.37
c	Contol Mode	Manual, LFO	Switches the control of resonance intensity. ☞P.37
	Trim	0...100	Input level to the Resonator
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed
	LFO Depth	–100...100	Amount of resonance intensity control via LFO
e	Resonance	–100...+100	Sets the intensity of resonance when Control Mode = Manual. ☞P.37
	High Damp[%]	0...100%	Damping amount of resonant sound in the high range ☞P.37

D-mod

b: Pitch
b: Fine[cent]

The Pitch parameter specifies the pitch of resonance by note name. The Fine parameter allows for fine adjustment in steps of cents.

c: Contol Mode
e: Resonance

This parameter determines whether the resonance intensity is controlled by an LFO or not.

With Control Mode = Manual, the Resonance parameter sets the intensity of resonance. If the Resonance parameter has a negative value, harmonics will be changed, and resonance will occur at a pitch one octave below.

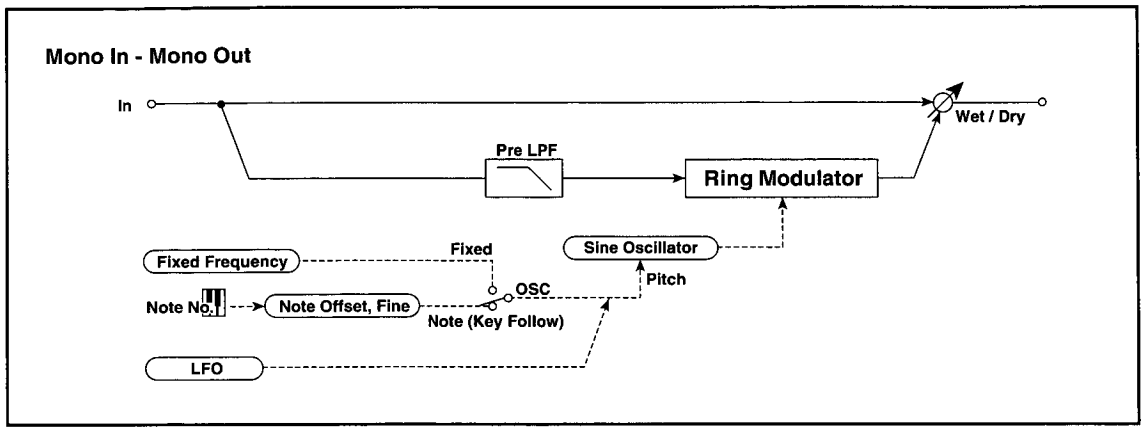
With Control Mode = LFO, the intensity of resonance varies according to the LFO. The LFO sways between positive and negative values, causing resonance to occur between specified pitches an octave apart in turn.

e: High Damp[%]

This parameter sets the damping amount of resonant sound in the high range. Lower values will make a metallic sound with a higher range of harmonics.

23: RingModulator (Ring Modulator)

This effect creates a metallic sound by routing the input signal to an Oscillator. You will obtain a very radical modulation by modulating or operating the Oscillator using an LFO or dynamic modulation. Since the Oscillator frequency can match the note number, you can create a ring modulation effect that follows the scale.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	OSC (OSC Mode)	Fixed, Note(Key Follow)	Determines whether the Oscillator frequency is specified or the note number is followed. ☞P.38	
	Pre LPF	0...100	Sets the damping amount of the sound input to the Ring Modulator in the high range. ☞P.38	
c	FixedFrq[Hz] (Fixed Frequency [Hz])	0...12.00kHz	Oscillator frequency when OSC = Fixed ☞P.38	D-mod
	Src	None...Tempo	Modulation Source of the Oscillator frequency when OSC = Fixed	
	A (Amt)	–12.00...+12.00kHz	Modulation Amount of the Oscillator frequency when OSC = Fixed	
d	Note Offset	–48...+48	Pitch difference from the note number when OSC = Note(Key Follow) ☞P.38	
	Note Fine	–100...+100	Fine adjustment of the Oscillator frequency ☞P.38	
e	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	Speed of LFO that modulates the Oscillator frequency	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
f	LFO Depth (Depth)	0...100	Depth of LFO modulation applied to the Oscillator frequency	D-mod
	Src	None...Tempo	Modulation source of modulation depth	
	Amt	–100...+100	Modulation amount of modulation depth	

b: OSC

This parameter determines whether the Oscillator frequency follows the note number.

b: Pre LPF

This parameter sets the damping amount of the sound input to the Ring Modulator. If the input signal contains a lot of harmonics, the effect sound tends to be dirty. In this case, cut a certain amount of the high range.

c: FixedFrq[Hz]

This parameter sets the oscillator frequency when OSC is set to Fixed.

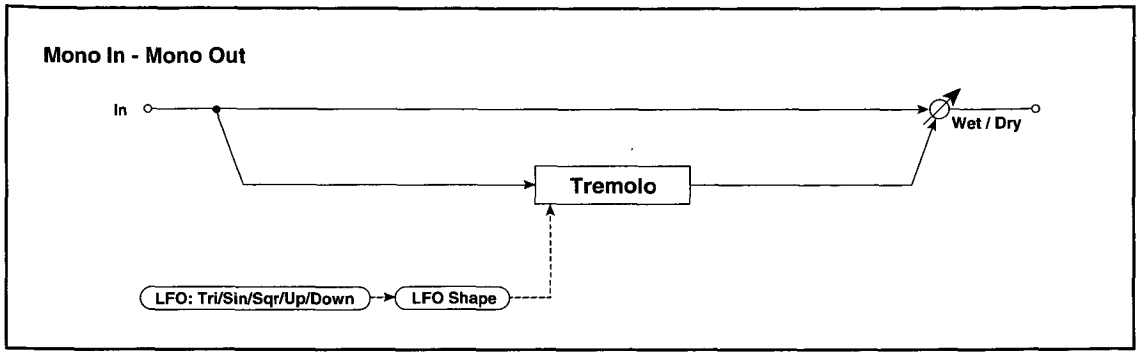
d: Note Offset
d: Note Fine

These are used to set the oscillator when OSC is set to Note (Key Follow). The Note Offset parameter specifies the pitch difference from the original note number in steps of semitones. The Note Fine parameter is used to "fine-tune" this setting in steps of cents. When the oscillator frequency follows the note number, you will obtain a ring modulation effect in the correct scale.

size1

24: Tremolo

This effect modulates the volume level of the input signal.

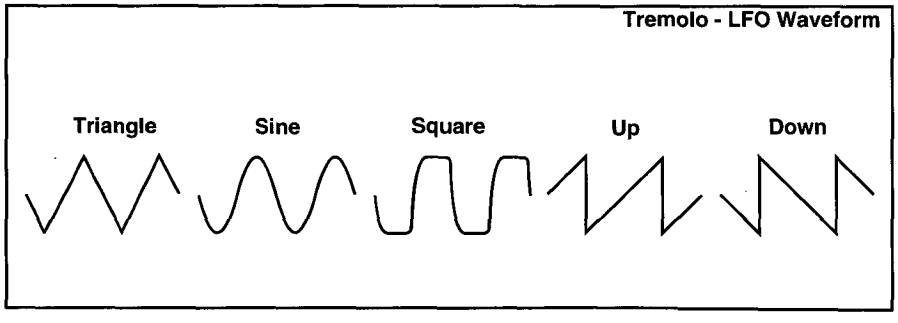


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the depth of modulation	
	Amt	–100...+100	Modulation amount of the depth of modulation	
d	LFO Waveform	Tri (Triangle), Sine, Square, Up, Down	Selects LFO Waveform. ☞P.39	
	LFO Shape	–100...+100	Determines how much the shape of LFO waveform is changed. ☞P.30	

d: LFO Waveform

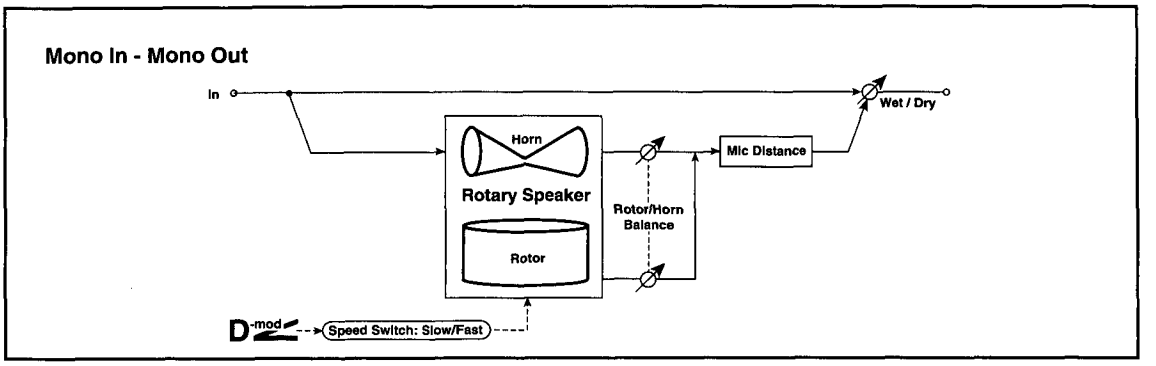
This parameter selects the LFO waveform.

Square wave simulates the characteristics of the tremolo created on a guitar amplifier. Combining this effect with the Amp Simulation will make a realistic, vintage tremolo amplifier sound.



25: RotarySpeaker (Rotary Speaker)

This effect simulates a rotary speaker which is essential to organ sounds. This size 1 Rotary Speaker effect is monaural. You can change the speed of speaker rotation via dynamic modulation. The effect also simulates the microphone settings.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Speed Switch	Slow, Fast	Switches the speaker rotation speed between slow and fast.	D-mod
	Src	None...Tempo	Modulation source that toggles between slow and fast	
	Sw	Moment (Momentary), Toggle	Selects switching mode of the modulation source that toggles between slow and fast. ☞P.40	
c	Horn Accel (Horn Acceleration)	0...100	How quickly the horn rotation speed in the high range is switched ☞P.40	
	Horn Ratio	Stop, 0.50...2.00	Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation.	
d	Mic Distance	0...100	Distance between the microphone and rotary speaker. ☞P.40	
	Rotor/Horn Bal (Rotor/Horn Balance)	Rotor, 1...99, Horn	Sets the volume level balance between the low-range rotor and high-range horn.	

b: Sw

This parameter sets how the rotation speed (slow and fast) is switched via the modulation source.

When Sw = Moment, the speed is usually slow. It becomes fast only when you keep the connected MIDI keyboard's pedal depressed or operate the joystick.

MIDI When a value for the modulation source is less than 64, "slow" speed is selected, and when the value is 64 or higher, "fast" is selected.

When Sw = Toggle, the speed is switched between slow and fast each time you press the connected MIDI keyboard's pedal or operate the joystick.

MIDI Each time the value of the modulation source exceeds 64, the speed is switched between slow and fast.

c: Horn Accel

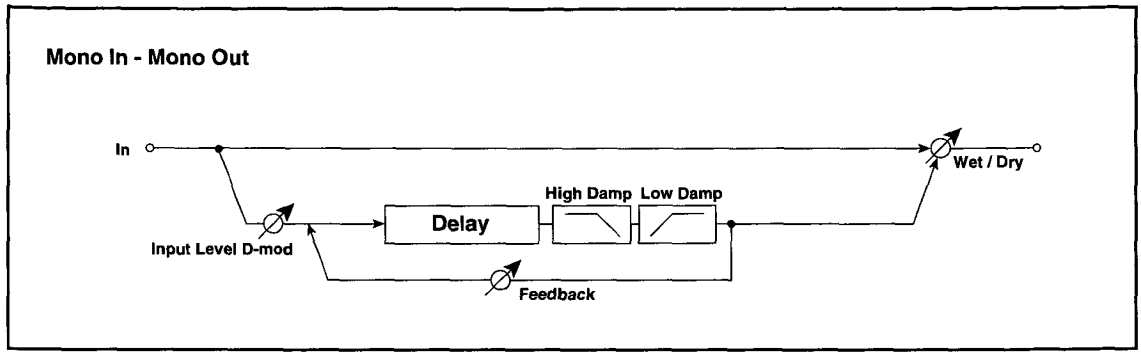
On a real rotary speaker, the rotation speed is accelerated or decelerated gradually after you switch the speed. The Horn Accel parameter sets the speed at which the rotation is accelerated or decelerated.

d: Mic Distance

This simulates microphone settings, specifying the distance between the microphone and rotary speaker.

26: Delay

This delay effect delays the input signal over time. You can change the character of the delay sound by setting the feedback damping amount separately for the low range and high range.



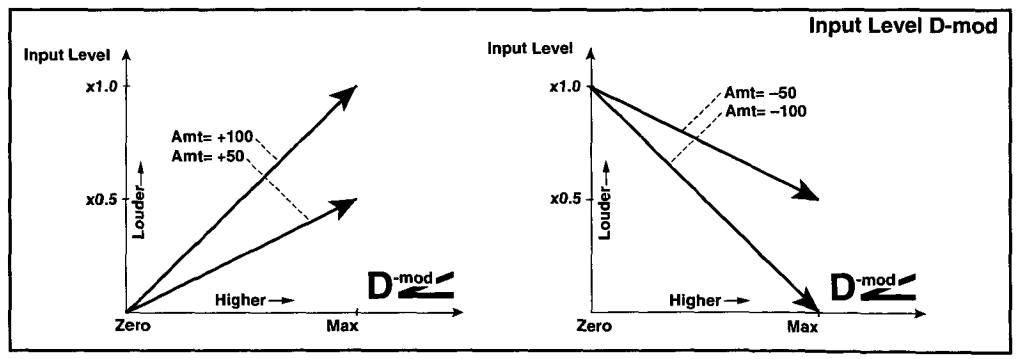
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	*Time[ms] (Delay Time [msec])*	*0.0...680.0msec*	*Sets the delay time.*	
c	Feedback	–100...+100	Sets the feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the feedback amount	
	Amt	–100...+100	Modulation amount of the feedback amount	
d	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
e	*In Level Src (Input Level D-mod: Src)*	*None...Tempo*	*Modulation source of the input level* ☞P.41	D-mod
	Amt	–100...+100	Modulation amount of the input level	

d: High Damp[%]
d: Low Damp[%]

These parameters set the damping amount for the high range and low range respectively. Each time feedback is input, the tone of the delay sound becomes darker, or lighter.

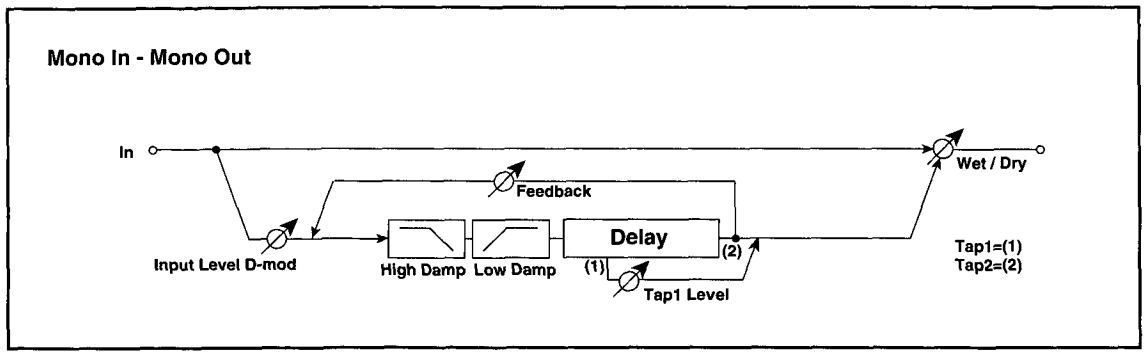
e: In Level Src
e: Amt

These parameters set dynamic modulation of the input level.



27: MultitapDelay (Multitap Delay)

This Multitap Delay has two taps for delay. With various delay time settings, you can create complex delay sounds.

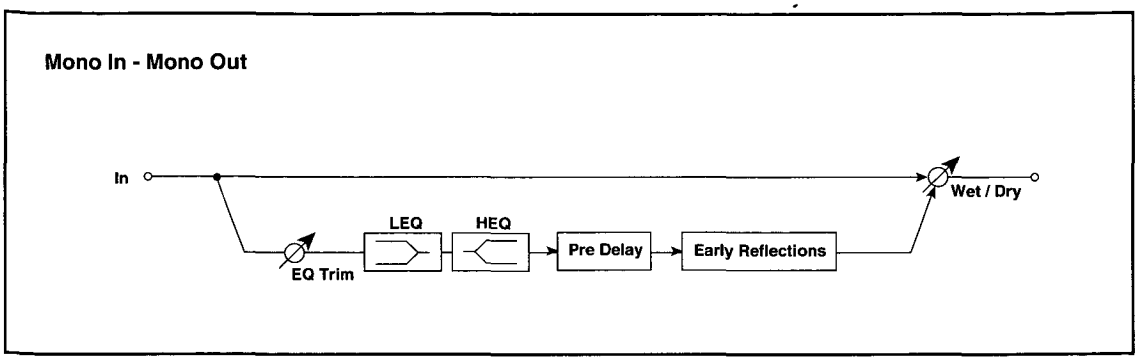


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Tap1 Time[ms] (Tap1 Time [msec])	0.0...680.0msec	Sets the Tap1 delay time.	
	Tap2 Time[ms] (Tap2 Time [msec])	0.0...680.0msec	Sets the Tap2 delay time.	
c	Tap1 Level	+0...+100	Tap1 output level ☞P.42	
d	Feedback	−100...+100	Sets the Tap2 feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the Tap2 feedback amount	
	Amt	−100...+100	Modulation amount of the Tap2 feedback amount	
e	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
f	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	−100...+100	Modulation amount of the input level	

c: Tap1 Level This parameter sets the output level of Tap1. Creating a difference in the volume level from Tap2 will add a groove feeling to a somewhat monotonous delay and feedback.

28: Early Reflect (Early Reflections)

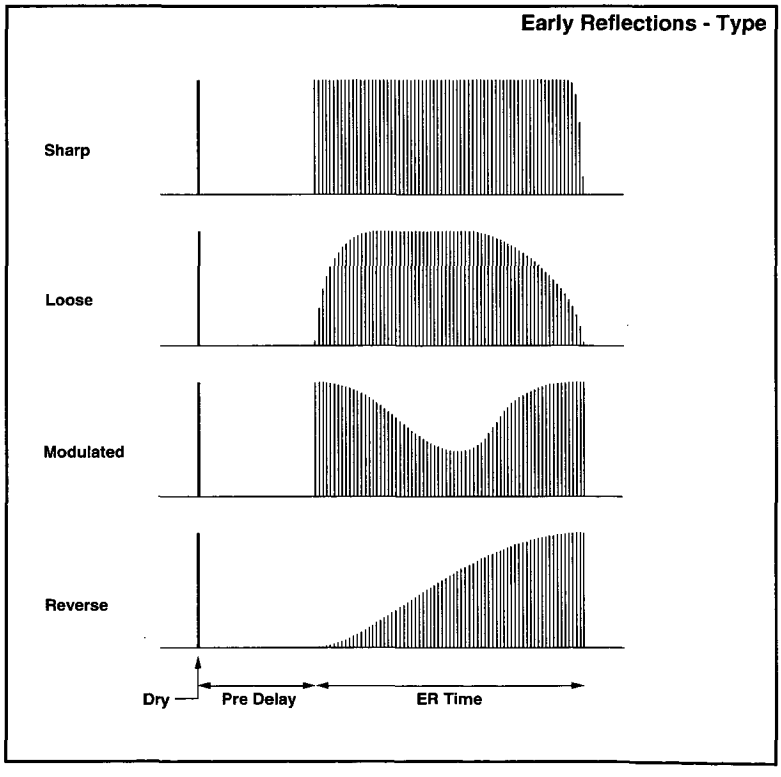
This effect is only the early reflection part of a reverberation sound, and adds presence to the sound. You can also create sounds such as gated reverb and reversed effects by selecting the decay curve of the early reflection.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Type	Sharp, Loose, Modulated, Reverse	Selects the decay curve for the early reflection. ☞P.43
	ER Time[ms] (ER Time [msec])	10...400msec	Time length of early reflection
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Time taken from the original sound to the first early reflection
	EQ Trim	0...100	Input level of EQ applied to the effect sound
d	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low range EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High range EQ gain

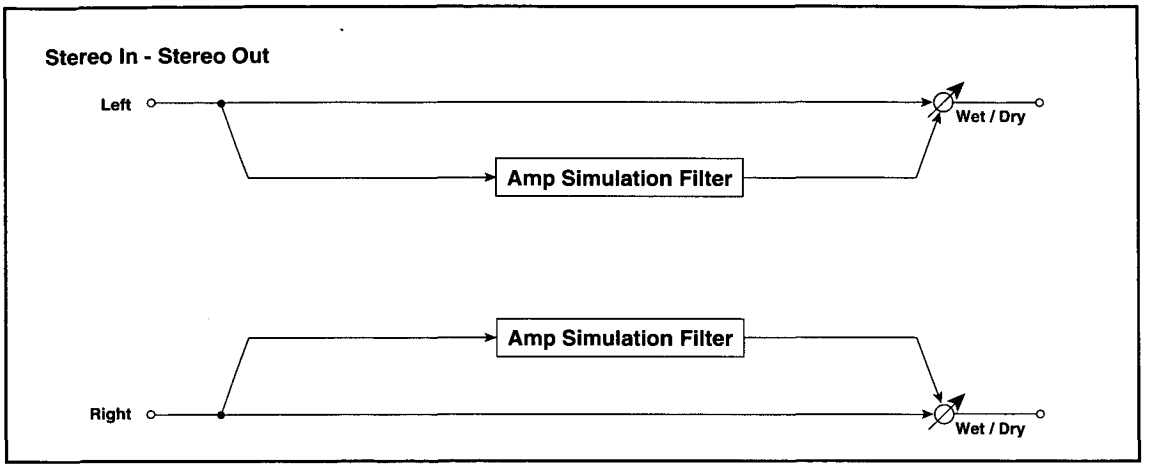
D-mod

b: Type This parameter selects the decay curve for the early reflection.



00: St.AmpSimulat (St. Amp Simulation)

This is a stereo amp simulator.

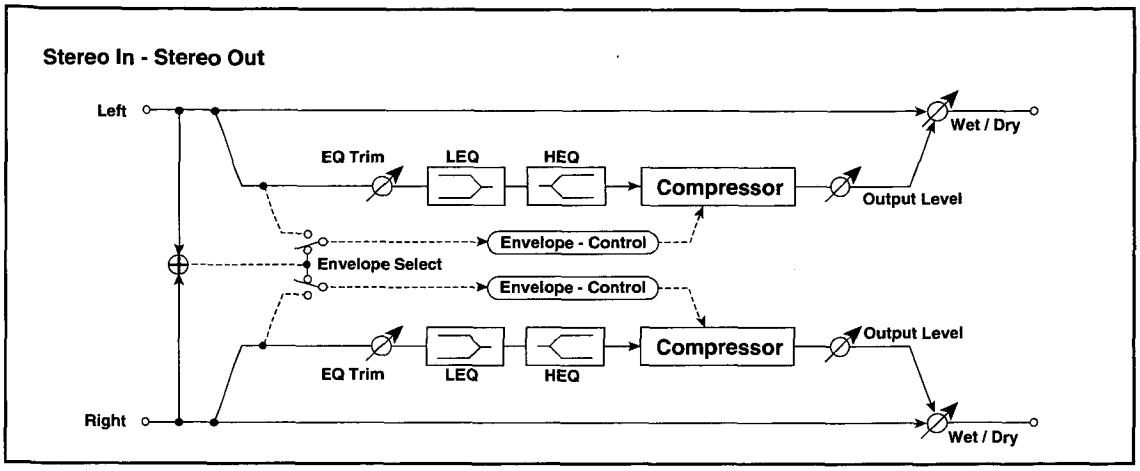


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Amplifier Type	SS, EL84, 6L6	Selects the type of guitar amplifier

D-mod

01: St.Compressor (Stereo Compressor)

This is a stereo compressor. You can link left and right channels, or use each channel separately.

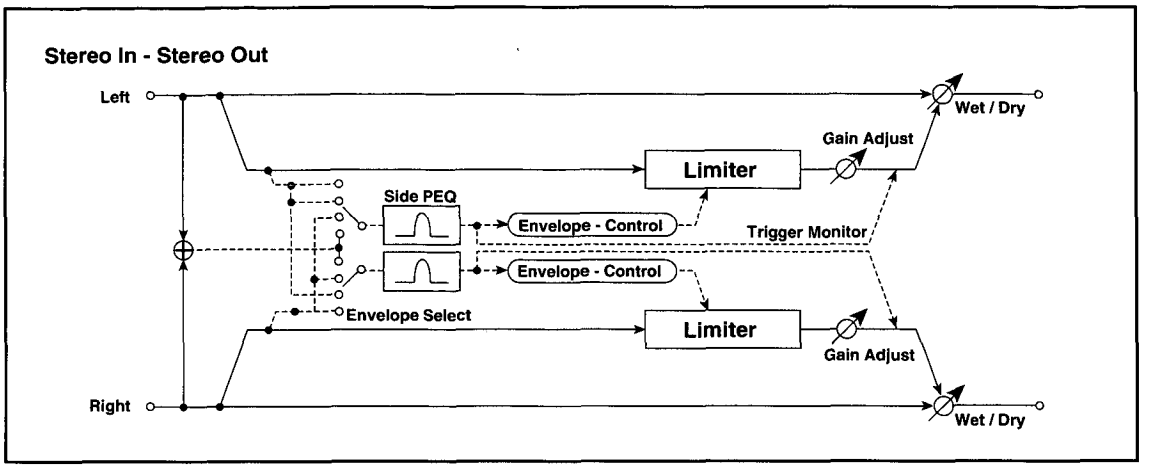


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Sensitivity	1...100	Sets the sensitivity. ☞P.14
	Attack	1...100	Attack level ☞P.14
c	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High EQ gain
d	EQ Trim	0...100	Input level to EQ
	Output Level	0...100	Output level from the compressor ☞P.14
e	Envelope (Envelope Select)	L/R Mix, L/R Indiv. (L/R Individually)	Determines whether the left and right channels are linked or used separately. ☞P.45

e: Envelope This parameter selects whether the left and right channels are linked to control both signals simultaneously, or whether each channel is controlled independently.

02: St.Limiter (Stereo Limiter)

This effect is a stereo limiter. You can link left and right channels, or use each channel individually.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Ratio	1.0:1...50.0:1, Inf:1	Sets the signal compression ratio. ☞P.15	
	Threshold[dB]	–40...0dB	Sets the level above which the compressor is applied. ☞P.15	
c	Attack	1...100	Sets the attack time. ☞P.16	
	Release	1...100	Sets the release time. ☞P.16	
d	Gain Adjust[dB]	–16...+24dB	Sets the output gain. ☞P.15	
	Envelope (Envelope Select)	L/R Mix, L Only, R Only, L/R Indiv. (L/R Individually)	Selects from linking both channels, controlling only from left channel, only from the right channel, or controlling each channel individually. ☞P.46	
e	Side PEQ Insert	Off, On	Toggles between trigger signal's EQ on/off ☞P.16	
	Trigger Monitor	Off, On	Switches between effect output monitor and trigger signal monitor. ☞P.16	
f	SidePEQ G[dB] (Gain [dB])	–18.0...+18.0dB	Trigger signal's EQ gain ☞P.16	
	Fc[Hz] (Side PEQ Cutoff [Hz])	20...12.00kHz	Trigger signal's EQ center frequency	
	Q	0.5...10.0	Trigger signal's EQ bandwidth	

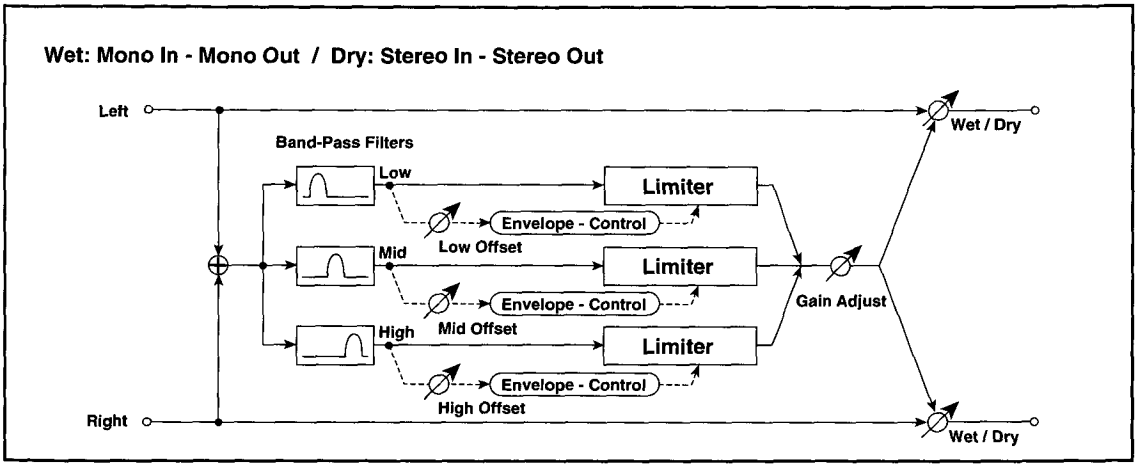
d: Envelope

When L/R Mix is selected for this parameter, the left and right channels are linked to control the Limiter using the mixed signal. If L Only (or R Only) is selected, the left and right channels are linked, and the Limiter is controlled via only the left (or right) channel.

With L/R Indiv., the left and right channels control the Limiter individually.

03: MltBand Limit (Multiband Limiter)

This effect applies the Limiter to the low range, mid range, and high range of the input signal. You can control dynamics for each range to adjust the sound pressure of the low range, mid range, and high range in a different way from the EQ.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Ratio	1.0:1...50.0:1, Inf:1	Sets the signal compression ratio.	☞P.15
	Threshold[dB]	−40...0dB	Sets the level above which the compression is applied.	☞P.15
c	Attack	1...100	Sets the attack time.	☞P.16
	Release	1...100	Sets the release time.	☞P.16
d	Low Offset[dB]	−40...0dB	Gain of the low-range trigger signal	☞P.47
	Mid Offset[dB]	−40...0dB	Gain of the mid-range trigger signal	☞P.47
e	High Offset[dB]	−40...0dB	Gain of the high-range trigger signal	☞P.47
	Gain Adjust[dB]	−16...+24dB	Sets the output gain.	☞P.15

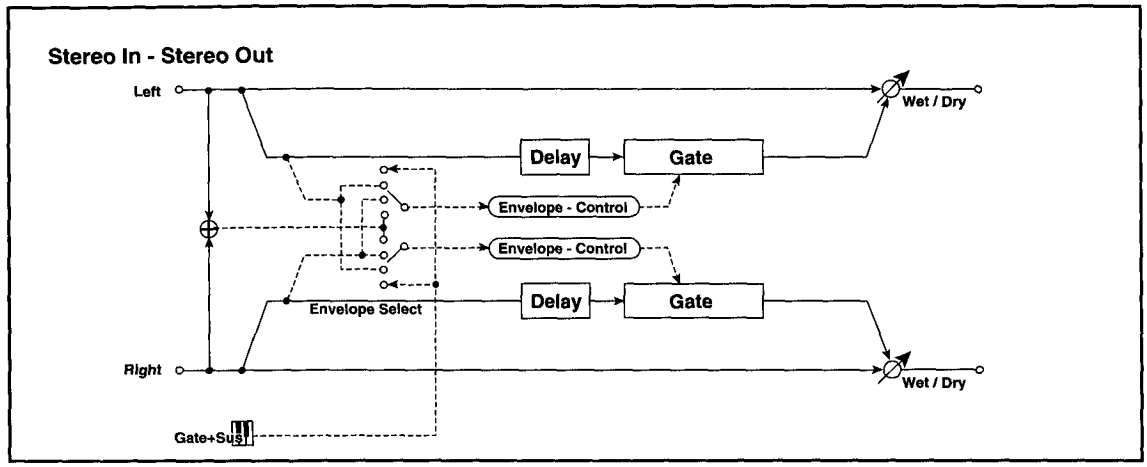
d: Low Offset[dB]
d: Mid Offset[dB]
e: High Offset[dB]

These parameters set the input gain of the trigger signal.

For example, if you do not want to apply compression to the high range, reduce the High Offset value down below the Threshold level. In this way, the high range limiter will not respond, and compression will not be applied.

04: Stereo Gate

This is a stereo gate effect. Three types are available to turn the gate on/off. This effect features a Hold function that keeps the gate open for a specified period of time.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Polarity	+, –	Switches between non-reversed and reversed Gate on/off. ☞P.48	
	Type (Type Select)	Level-NoHldTime (Level(Hold time is not available)), Trigger Attack, Trigger Release	Selects from No hold, Hold from attack, and hold from release. ☞P.48	
c	Envelope Sel (Envelope Select)	D-mod, L/Rmix (L/R Mix), L Only, R Only	Selects from Control via the modulation source, mixing the left and right signals, Only left, and Only right. ☞P.49	D-mod
	Src	None...Gate2S (Gate2+Sus)	Modulation source that controls the gate when Envelope Sel= D-mod	
d	Threshold	0...100	Sets the level to which the Gate is applied. ☞P.17	
e	Hold Time[ms] (Hold Time [msec])	0...3000msec	Gate hold time ☞P.48	
	Delay Time[ms] (Delay Time [msec])	0...100msec	Delay time of gate input ☞P.17	
f	Attack	1...100	Sets attack time. ☞P.17	
	Release	1...100	Sets release time. ☞P.17	

b: Polarity

This parameter reverses the Gate on/off operation. With a negative value, the gate is closed when the input signal level exceeds the Threshold. The gate operation controlled by the modulation source is also reversed.

b: Type

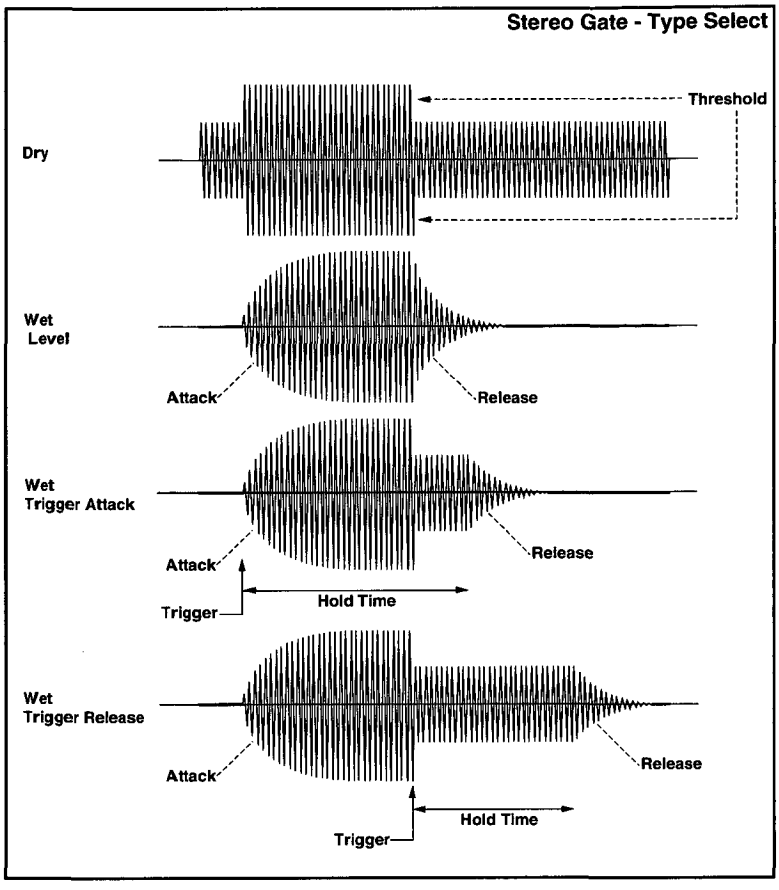
This parameter selects the gate type.

e: Hold Time[ms]

With Type = Level, the gate is opened when the input signal level exceeds the specified Threshold value, and the gate is closed when the level is below the Threshold. Hold Time is not effective.

With Type = Trigger Attack, the gate is open only during the period specified in the Hold Time field, after the input signal level exceeds the Threshold value. Once the gate is closed, it remains closed until the input level exceeds the Threshold value again.

With Type = Trigger Release, the gate is open when the input signal level exceeds the Threshold value. The gate is closed for a period specified in the Hold Time field after the level falls below the Threshold.



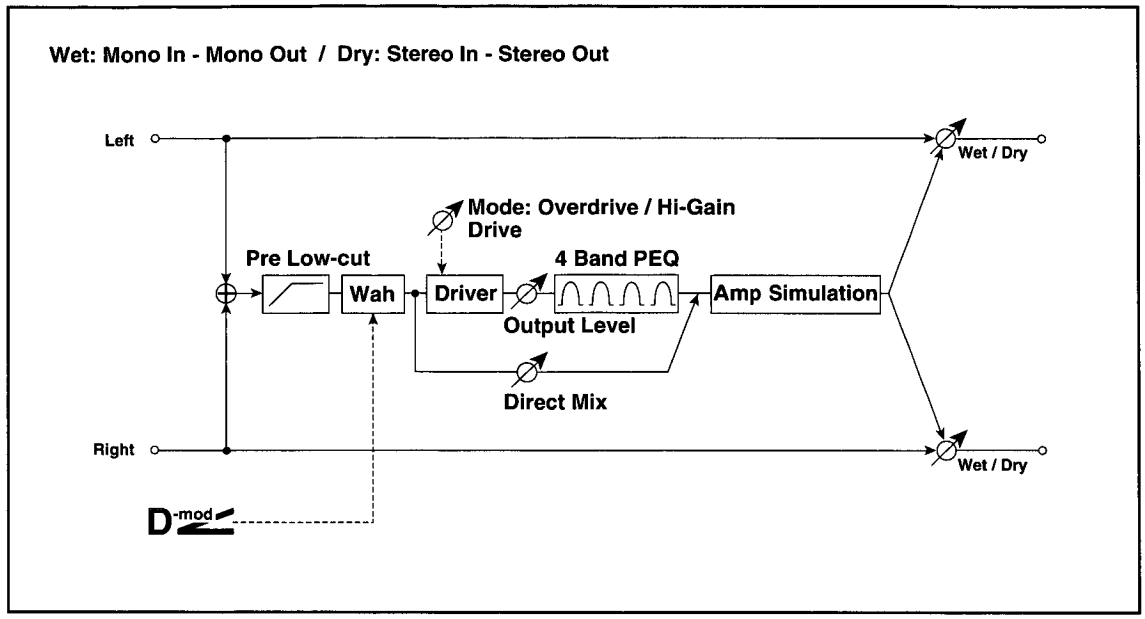
c: Envelope Sel
c: Src

The Envelope Sel parameter selects whether the gate on/off is triggered by the level of the input signal, or controlled directly by the modulation source. The Src parameter specifies the modulation source, selected from None to Gate2S.

With Envelope Sel = L/Rmix, the left and right channel signal mixture will trigger the gate on/off. When L Only or R Only is selected, the gate is controlled by either of the channel signals.

05: OD/HiGain Wah (OD/Hi-Gain Wah)

This effect is a distortion with wah, 4-band EQ and amp simulator.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Wah	Off, On	Switches Wah on/off. ☞P.50	D-mod
	Src	None...Tempo	Modulation source that controls the Wah.	
	Sweep Range (Wah Sweep Range)	−10...+10	Sets the range of Wah. ☞P.50	
c	Mode (Drive Mode)	Overdrive, Hi-Gain	Switches between overdrive and hi-gain distortion.	
	Drive	1...100	Sets the degree of distortion. ☞P.18	
d	Output Level	0...50	Sets the output level.	
	Pre Low-cut	0...10	Low range cut amount of the distortion input ☞P.18	
e	Band1 Fc[Hz] (Band1 Cutoff [Hz])	20...1.0kHz	Equalizer - Band 1 center frequency	
	Gain[dB]	−18...+18dB	Band 1 gain	
	Q	0.5...10.0	Band 1 bandwidth ☞P.18	
f	Band2 Fc[Hz] (Band2 Cutoff [Hz])	50...5.00kHz	Band 2 center frequency	
	Gain[dB]	−18...+18dB	Band 2 gain	
	Q	0.5...10.0	Band 2 bandwidth ☞P.18	
g	Band3 Fc[Hz] (Band3 Cutoff [Hz])	300...10.00kHz	Band 3 center frequency	
	Gain[dB]	−18...+18dB	Band 3 gain	
	Q	0.5...10.0	Band 3 bandwidth ☞P.18	
h	Band4 Fc[Hz] (Band4 Cutoff [Hz])	500...20.00kHz	Band 4 center frequency	
	Gain[dB]	−18...+18dB	Band 4 gain	
	Q	0.5...10.0	Band 4 bandwidth ☞P.18	
i	Direct Mix	0...50	Amount of the dry sound mixed to the distortion	
	Speaker Sim (Speaker Simulation)	Off, On	Speaker simulation on/off	

b: Wah
b: Src

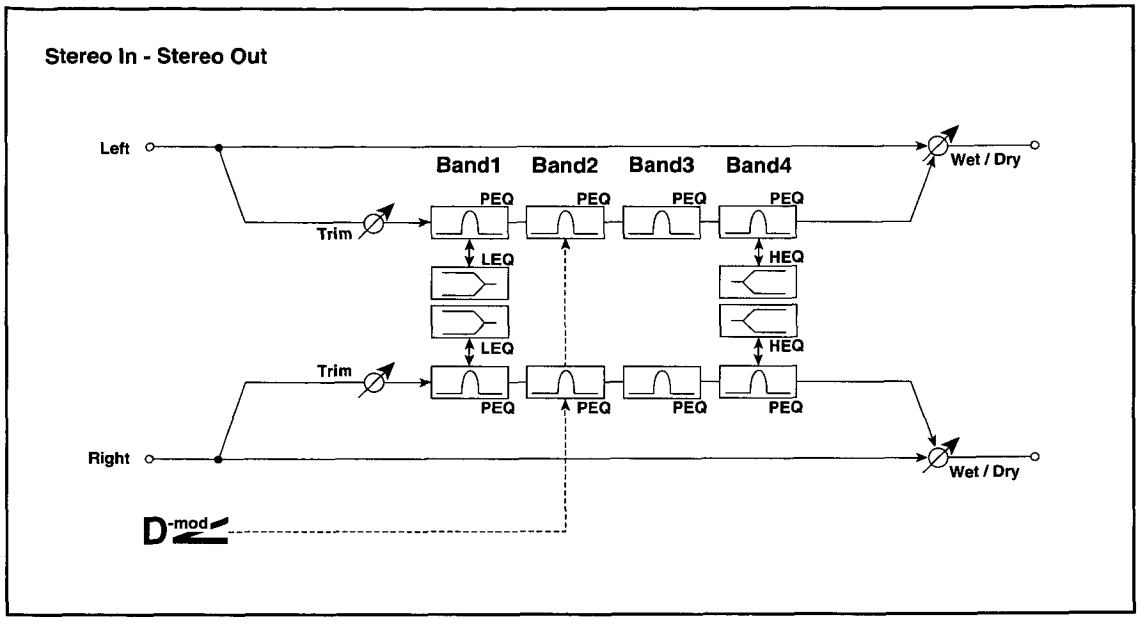
The Wah parameter switches the wah effect on/off. The wah center frequency can be controlled by the modulation source specified in the Src parameter.

b: Sweep Range

This parameter sets the sweep range of the wah center frequency. A negative value will reverse the direction of sweep.

06: St.Para.4EQ (St. Parametric 4EQ)

This is a stereo 4-band parametric equalizer. You can select peaking type or shelving type for Band 1 and 4. The gain of Band 2 can be controlled by dynamic modulation.

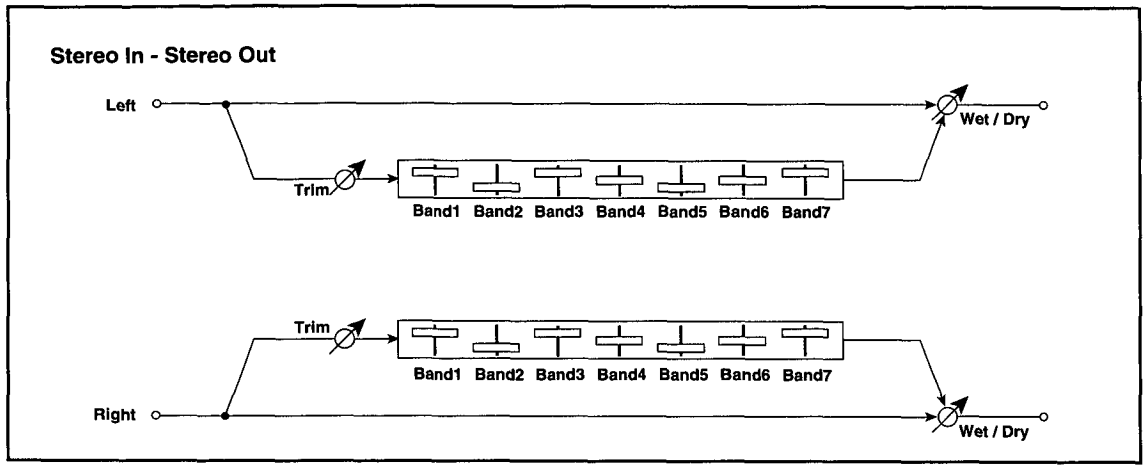


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
b	Band1 Type	Peaking, Shelf-Lo (Shelving-Low)	Selects the type for Band 1. ☞P.19
	Band4 Type	Peaking, Shelf-Hi (Shelving-High)	Selects the type for Band 4. ☞P.19
c	Band1 Fc[Hz] (Band1 Cutoff [Hz])	20...1.0kHz	Sets the center frequency for Band 1.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the gain of Band 1.
	Q	0.5...10.0	Band 1 bandwidth ☞P.18
d	Band2 Fc[Hz] (Band2 Cutoff [Hz])	50...10.00kHz	Sets the center frequency for Band 2.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the gain of Band 2. ☞P.19
	Q	0.5...10.0	Band 2 bandwidth ☞P.18
e	Band3 Fc[Hz] (Band3 Cutoff [Hz])	300...10.00kHz	Sets the center frequency for Band 3.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the gain of Band 3.
	Q	0.5...10.0	Band 3 bandwidth ☞P.18
f	Band4 Fc[Hz] (Band4 Cutoff [Hz])	500...20.00kHz	Sets the center frequency for Band 4.
	G[dB] (Gain [dB])	−18.0...+18.0dB	Sets the gain of Band 4.
	Q	0.5...10.0	Band 4 bandwidth ☞P.18
g	Trim	0...100	Sets the input level.
h	Band2 Src (Band2 Dynamic Gain Src)	None...Tempo	Modulation source of the Band 2 gain ☞P.19
	Gain Amt[dB] (Amt [dB])	−18.0...+18.0dB	Modulation amount of Band 2 gain

D-mod

07: St.Graphic7EQ (St. Graphic 7EQ)

This is a stereo 7-band graphic equalizer. You can select a center frequency setting for each band from twelve types, according to the sound.

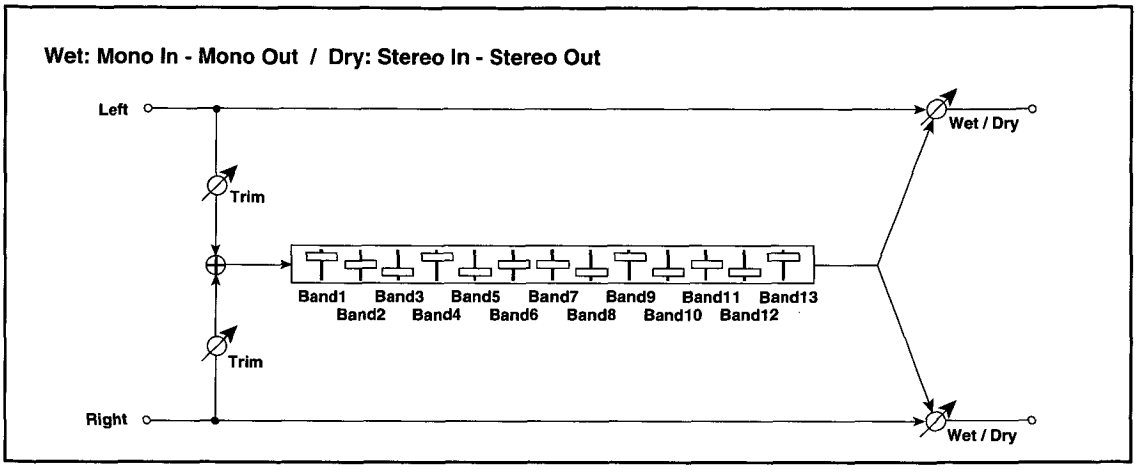


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Type	1:Wide 1 2:Wide 2 3:Wide 3 4:Half Wide 1 5:Half Wide 2 6:Half Wide 3 7:Low 8:Wide Low 9:Mid 10:Wide Mid 11:High 12:Wide High	Selects a combination of center frequencies for each band. ☞P.20
	Trim	0...100	Sets the input level.
c	B1[dB] (Band1 [dB])	–18.0...+18.0dB	Sets Band 1 gain.
	B2[dB] (Band2 [dB])	–18.0...+18.0dB	Sets Band 2 gain.
d	B3[dB] (Band3 [dB])	–18.0...+18.0dB	Sets Band 3 gain.
	B4[dB] (Band4 [dB])	–18.0...+18.0dB	Sets Band 4 gain.
e	B5[dB] (Band5 [dB])	–18.0...+18.0dB	Sets Band 5 gain.
	B6[dB] (Band6 [dB])	–18.0...+18.0dB	Sets Band 6 gain.
f	B7[dB] (Band7 [dB])	–18.0...+18.0dB	Sets Band 7 gain.

D-mod

08: Graphic 13EQ (Graphic 13Band EQ)

This effect is a 13-band graphic equalizer that allows for finer equalization. Two types of settings are available for the center frequency of each band.



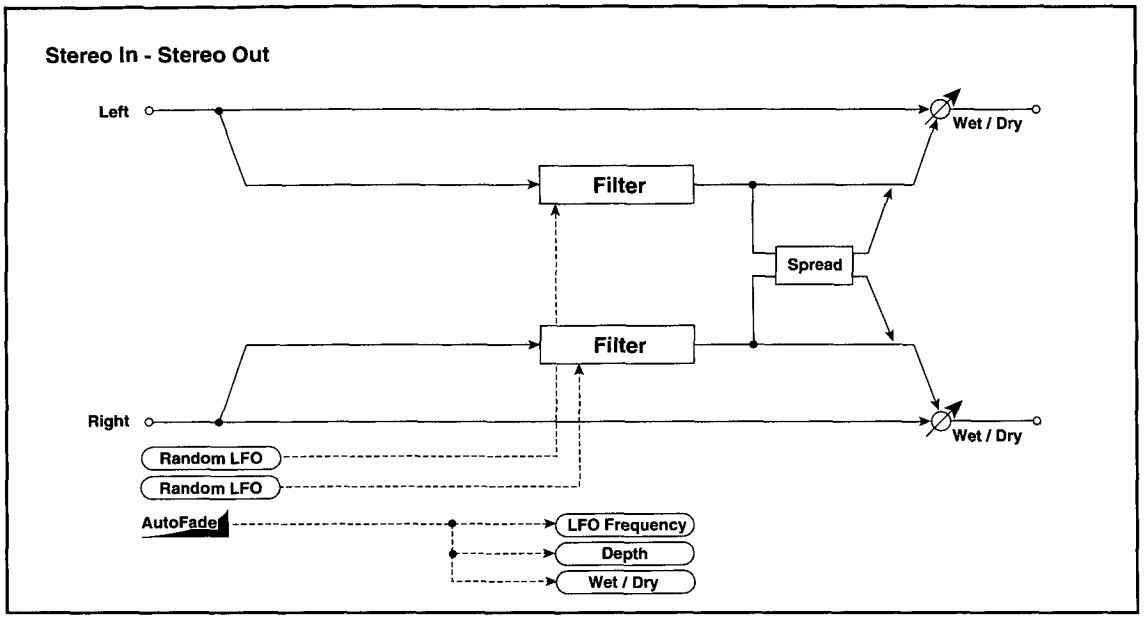
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Type	A, B	Selects a combination of center frequencies for each band. ☞P.53
	Trim	0...100	Sets the input level.
c	B1[dB] (Band1 [dB])	–18.0...+18.0dB	Sets Band 1 gain.
	B2[dB] (Band2 [dB])	–18.0...+18.0dB	Sets Band 2 gain.
d	B3[dB] (Band3 [dB])	–18.0...+18.0dB	Sets Band 3 gain.
	B4[dB] (Band4 [dB])	–18.0...+18.0dB	Sets Band 4 gain.
e	B5[dB] (Band5 [dB])	–18.0...+18.0dB	Sets Band 5 gain.
	B6[dB] (Band6 [dB])	–18.0...+18.0dB	Sets Band 6 gain.
f	B7[dB] (Band7 [dB])	–18.0...+18.0dB	Sets Band 7 gain.
	B8[dB] (Band8 [dB])	–18.0...+18.0dB	Sets Band 8 gain.
g	B9[dB] (Band9 [dB])	–18.0...+18.0dB	Sets Band 9 gain.
	B10[dB] (Band10 [dB])	–18.0...+18.0dB	Sets Band 10 gain.
h	B11[dB] (Band11 [dB])	–18.0...+18.0dB	Sets Band 11 gain.
	B12[dB] (Band12 [dB])	–18.0...+18.0dB	Sets Band 12 gain.
i	B13[dB] (Band13 [dB])	–18.0...+18.0dB	Sets Band 13 gain.

b: Type

This parameter selects a combination of center frequencies for each band. Each center frequency is shown on the right edge of the LCD.

09: St.RndmFilter (St. Random Filter)

This effect is a stereo random filter. You can also fade in the effect sound using Auto-Fade, or change the LFO speed.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod
	Src	None...A.FADE (AUTO-FADE)	Modulation source of effect balance. AutoFade is available	AutoFade
	Amt	–100...+100	Modulation amount of effect balance	
b	Cutoff	0...100	Filter center frequency	
	Resonance	0...100	Sets the resonance amount.	
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.05...50.00Hz	Speed of LFO that modulates the filter	D-mod
	Src	None...A.FADE (AUTO-FADE)	Modulation source of LFO speed. AutoFade is available	AutoFade
	A (Amt)	–50.00...+50.00Hz	Modulation amount of LFO speed	
d	Depth	0...100	Modulation depth of filter center frequency	D-mod
	Src	None...A.FADE (AUTO-FADE)	Modulation source of filter modulation. AutoFade is available	AutoFade
	Amt	–100...+100	Modulation amount of filter modulation	
e	Spread	–100...+100	Sets the spread of stereo image of the effect sound. ☞P.60	
f	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

f: AUTOFADE Src
f: Fade-In Rate

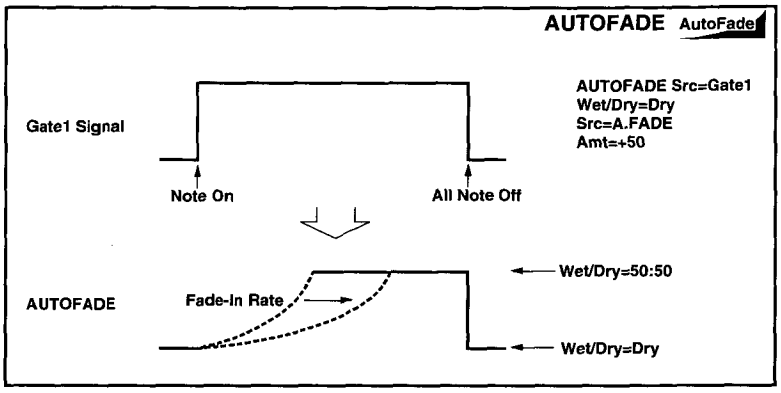
If AutoFade is selected for the LFO speed, depth of modulation, and Effect Balance, you can use the AutoFade function to apply modulation.

The AUTOFADE Src parameter selects the modulation source that triggers AutoFade. The Fade-in Rate parameter specifies the rate of fade-in.

MIDI The effect is off when a value for the dynamic modulation source specified for the AUTOFADE Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.

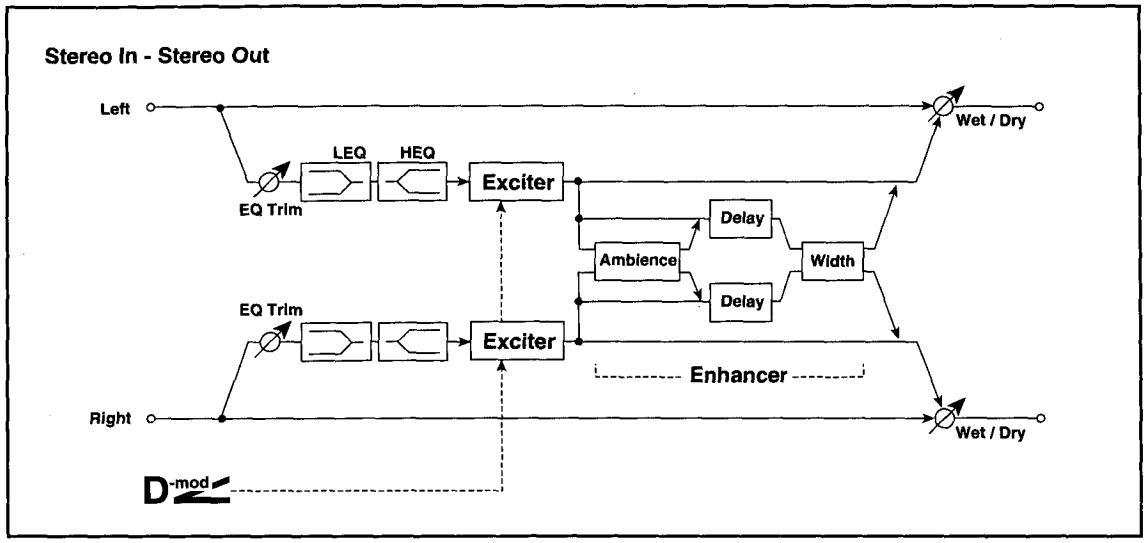
The following is an example of fade-in where the effect balance is increased from "Dry" to "50" when a note-on message is received.

f: AUTOFADE Src = Gate1
a: Wet/Dry = Dry
a: Src = A.FADE
a: Amt = +50



10: St.Enhancer (Stereo Enhancer)

This effect spreads and adds presence to the sound, and also functions as a stereo exciter. It is useful when you wish to emphasize a stereo image of the input signal or create a stereo image from a monaural source.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Exciter Blend	–100...+100	Sets the intensity (depth) of the Exciter effect. ☞P.24	D-mod
	Src	None...Tempo	Modulation source of the Exciter intensity	
	Amt	–100...+100	Modulation amount of the Exciter intensity	
c	Emphatic Point	0...140	Sets the frequency to be emphasized. ☞P.24	D-mod
	Src	None...Tempo	Modulation source of the frequency to be emphasized	
	Amt	–100...+100	Amount of modulation of the frequency to be emphasized	
d	EnhancDlyL[ms] (Enhancer Dly L [msec])	0...50.0msec	Delay time for the Enhancer left channel ☞P.56	
	EnhancDlyR[ms] (Enhancer Dly R [msec])	0...50.0msec	Delay time for the Enhancer right channel ☞P.56	
e	Enhancer Width	0...+100	Determines to what degree the Enhancer effect is applied	D-mod
	Src	None...Tempo	Modulation source of the Enhancer width	
	Amt	0...+100	Modulation amount of the Enhancer width	
f	Enhanc.Ambience (Enhancer Ambience)	0...100	Determines to what degree the Enhancer ambience effect is applied. ☞P.56	
	EQ Trim	0...100	2-band EQ input level	
g	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High EQ gain	

d: EnhancDlyL[ms]
d: EnhancDlyR[ms]

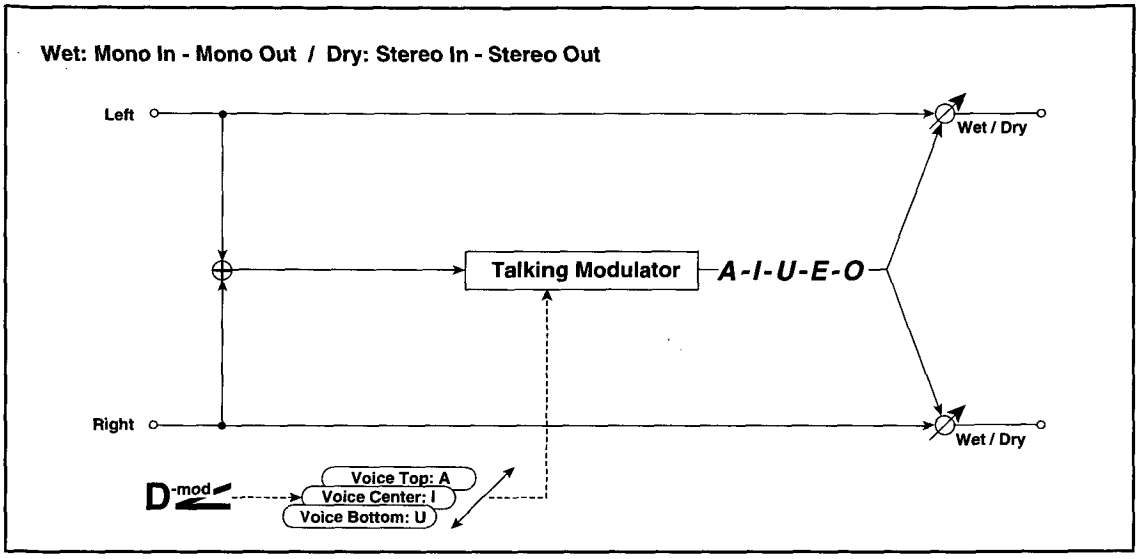
These parameters set the delay time for the Enhancer left and right channel. Specifying a slightly different delay time for the left and right channel will add a stereo image, depth, and width to the sound.

f: Enhanc.Ambience

This parameter determines to what degree the Enhancer ambience effect is applied. The ambience effect will create a wider stereo image. However, if e: Enhancer Width is set to 0 or the input source is monaural, this effect is not created.

11: Talking Mod. (Talking Modulator)

This effect adds an unusual character, like a human voice, to the input signal. Modulating the tone via dynamic modulation, you can create an interesting effect that sounds as if the instrument is talking.



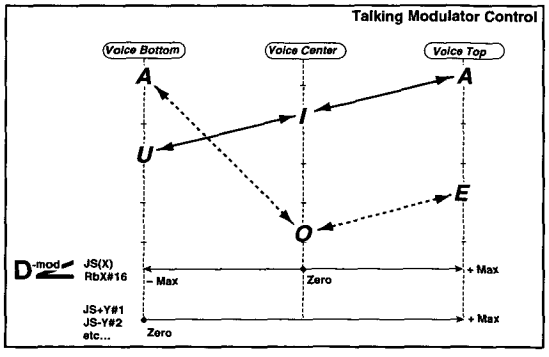
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual Ctrl (Manual Voice Control)	Bottom, 1...49, Center, 51...99, Top	Voice pattern control	
	D-mod Src (Src)	None...Tempo	Modulation source that controls the voice pattern	D-mod
c	Voice Top	A, I, U, E, O	Selects a vowel sound at the top end of control.	☞P.57
	Voice Center	A, I, U, E, O	Selects a vowel sound in the center of control.	☞P.57
d	Voice Bottom	A, I, U, E, O	Selects a vowel sound at the bottom end of control.	☞P.57
e	Formant Shift	–100...+100	Adjusts the frequency to which the effect is applied.	☞P.57
	Resonance	0...100	Level of resonance of the voice pattern	☞P.57

c: Voice Top
c: Voice Center
d: Voice Bottom

These parameters assign vowel sounds to the top, center, and bottom of the controller.

For example, if RbX#16 is selected as the modulation source:

With Voice Top = A, Voice Center = I, and Voice Bottom = U, moving the finger on the ribbon controller of the connected Trinity series from the right edge to the left edge will produce the vowel sounds "a", "i", then "u."



e: Formant Shift

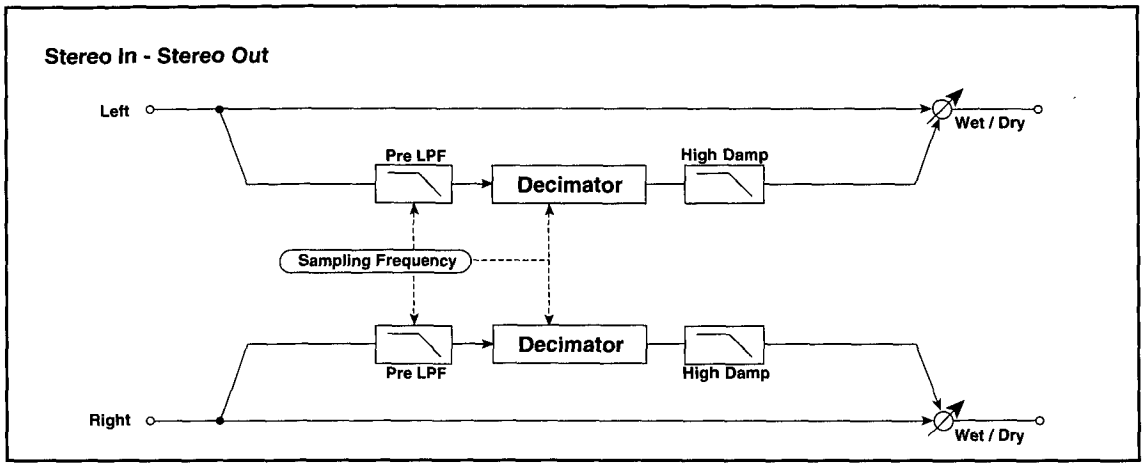
This parameter adjusts the frequency level to which the effect is applied. If you wish to apply the effect to a higher-range sound, set this parameter to a higher value; to apply the effect to a lower-range sound, set this to a lower value.

e: Resonance

This parameter sets the intensity of resonance for the voice pattern. A larger value will add more character to the sound.

12: St.Decimator (Stereo Decimator)

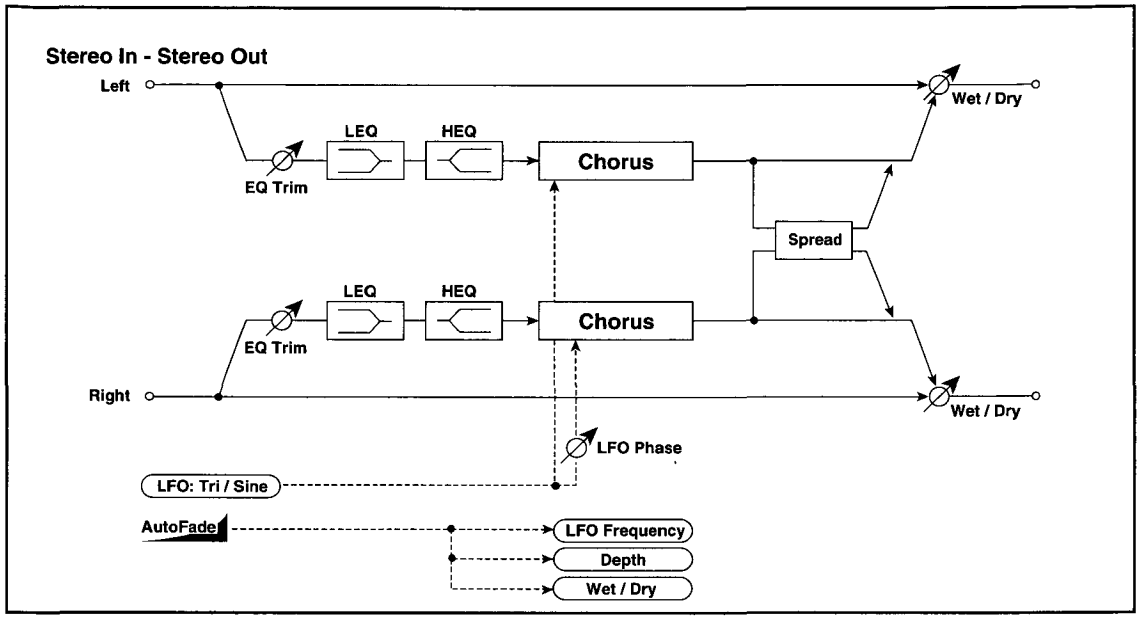
This is a stereo decimator.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	SamplFrq[Hz] (Sampling Freq [Hz])	1.00k...24.00kHz	Sets the sampling frequency.	D-mod
	Src	None...Tempo	Sets the modulation source of the sampling frequency.	
	A (Amt)	–24.00k...+24.00kHz	Sets the modulation amount of the sampling frequency.	
c	Pre LPF	Off, On	Selects whether the harmonic noise caused by a decrease in sampling frequency is generated or not. ☞P.26	
	High Damp[%]	0...100%	Ratio of cut of the high range	

13: St.Chorus (Stereo Chorus)

This is a stereo chorus. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other. The chorus effect can fade-in by means of the AutoFade function.



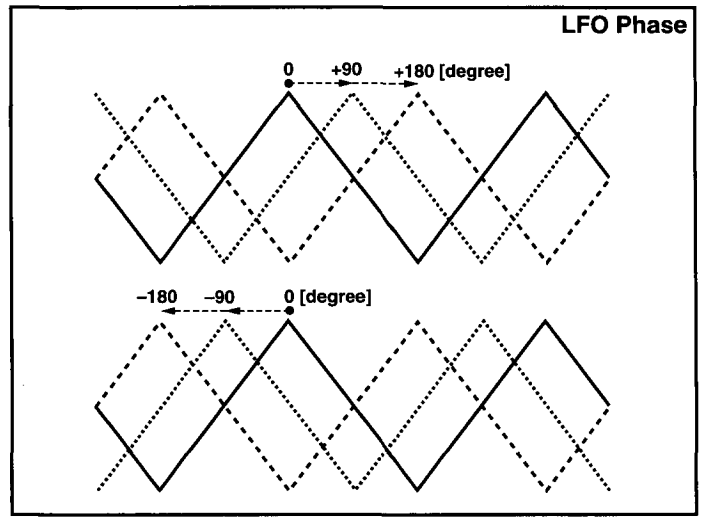
a	Wet/Dry	-Wet...-1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of effect balance. AutoFade is available	
	Amt	-100...+100	Modulation amount of effect balance	
b	L Pre Dly[ms] (L Pre Delay [msec])	0.0...50.0msec	Delay time for the left channel ☞P.59	
	R Pre Dly[ms] (R Pre Delay [msec])	0.0...50.0msec	Delay time for the right channel ☞P.59	
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of LFO speed. AutoFade is available	
	A (Amt)	-20.00...+20.00Hz	Modulation amount of LFO speed	
d	Depth	0...100	Depth of LFO modulation	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of the LFO modulation depth. AutoFade is available	
	Amt	-100...+100	Modulation amount of the LFO modulation depth	
e	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Phase[deg] (LFO Phase [degree])	-180...+180	LFO phase difference between the left and right ☞P.60	
f	LEQ Gain[dB] (Pre LEQ Gain [dB])	-15.0...+15.0dB	Low-EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	-15.0...+15.0dB	High-EQ gain	
g	EQ Trim	0...100	EQ input level	
	Spread	-100...+100	Sets the spread of stereo image of the effect sound. ☞P.60	
h	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

b: L Pre Dly[ms]
b: R Pre Dly[ms]

Setting the left and right delay time individually allows you to control the stereo image.

e: LFO Phase[deg]

Shifting the left and right LFOs' phase will cause modulation to be applied differently for the right and left, spreading and swelling the effect sound between the left and right.

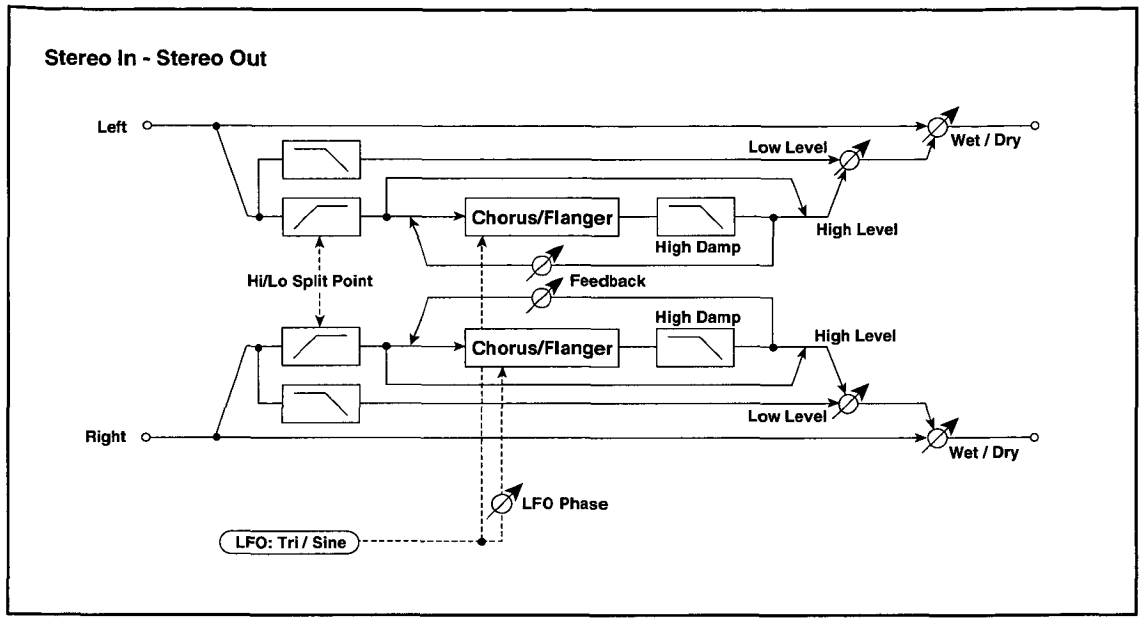


g: Spread

This parameter sets the width of stereo image of the effect sound. A value of +100 gives the widest spread, and a value of 0 causes the effect sound of both channels to be output from the center. A negative value will reverse the left and right channels of the effect sound.

14: St.HarmnicCho (St. Harmonic Chorus)

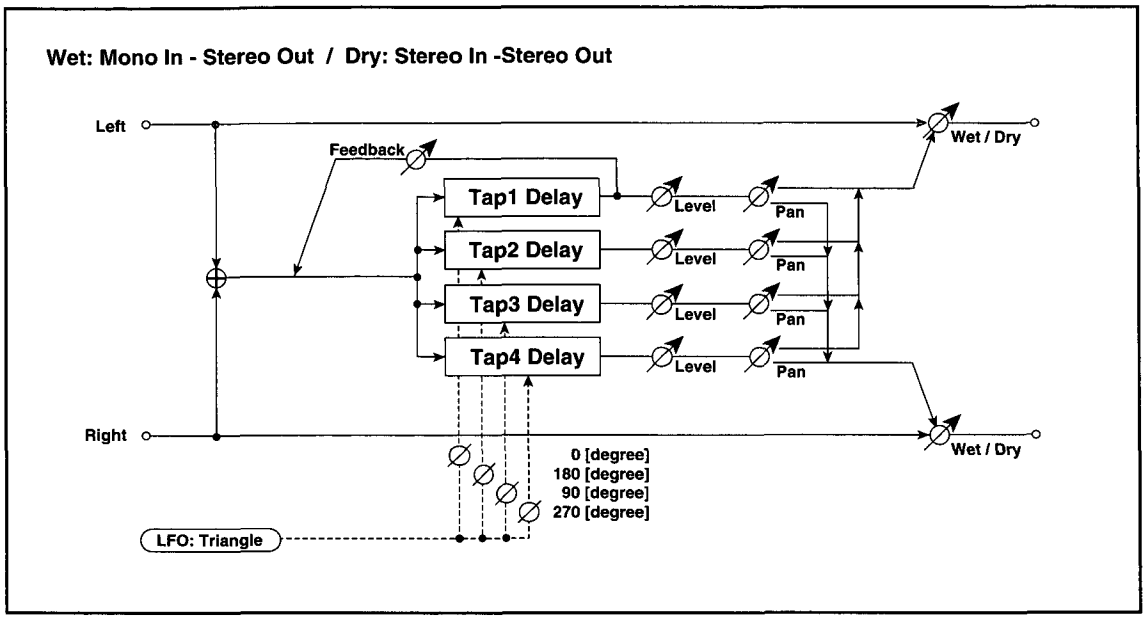
This is a stereo harmonic chorus. Shifting the left and right LFO phases from each other will add spread to the sound.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Hi/LoSplitPoint (High/Low Split Point)	1...100	Frequency split point between the high and low range ☞P.28	
	Pre Delay[ms] (Pre Delay [msec])	0.0...50.0msec	Delay from the original sound	
c	High Level	0...100	Output level in the high range (chorus)	
	Low Level	0...100	Output level in the low range	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation amount of the LFO modulation depth	
f	Feedback	–100...+100	Feedback amount of the chorus block ☞P.28	
	High Damp[%]	0...100%	Chorus block damping amount in the high range	
g	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	

15: MltTap ChoDly (Multitap Chorus/Dly)

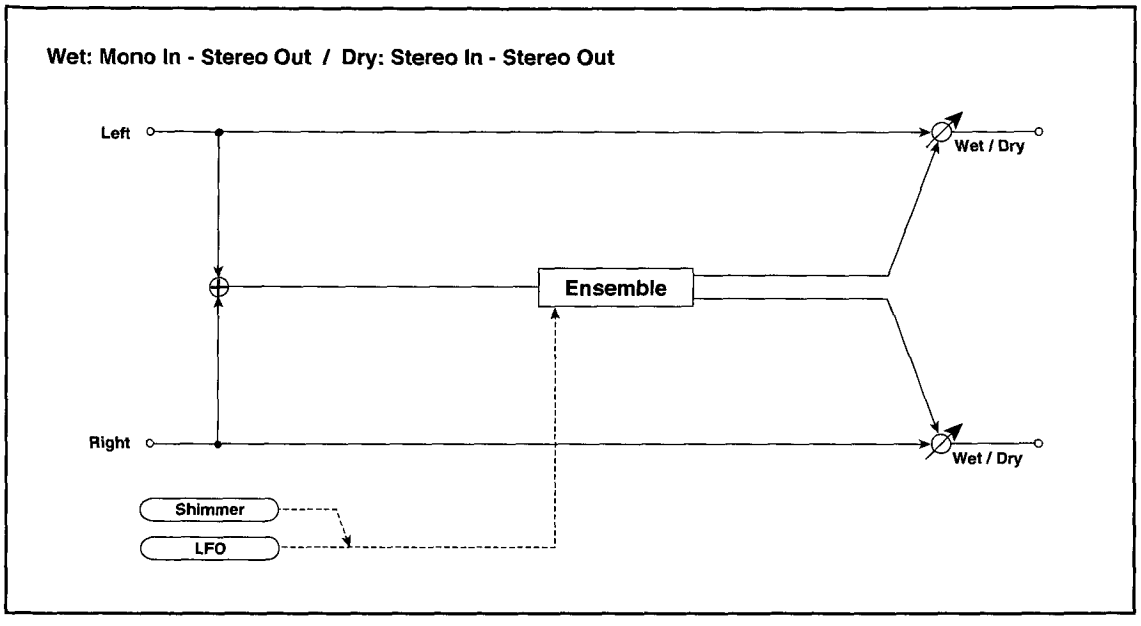
This effect has four chorus blocks with a different LFO phase. You can create a complex stereo image by setting each block's delay time, depth, output level, and pan individually. You can also fix some of the chorus blocks to combine the chorus and delay effects.4



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance and Tap1 feedback amount	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...13.00Hz	LFO speed	
c	Tap1(000) [ms] (Tap1(000) [msec])	0...570msec	Tap1 (LFO phase=0 degrees) delay time	
	Dep (Depth)	0...30	Tap1 chorus depth	
	Lvl (Level)	0...30	Tap1 output level	
	Pan	L6...L1, C, R1...R6	Tap1 stereo image	
d	Tap2(180) [ms] (Tap2(180) [msec])	0...570msec	Tap2 (LFO phase=180 degrees) delay time	
	Dep (Depth)	0...30	Tap2 chorus depth	
	Lvl (Level)	0...30	Tap2 output level	
	Pan	L6...L1, C, R1...R6	Tap2 stereo image	
e	Tap3(090) [ms] (Tap3(090) [msec])	0...570msec	Tap3 (LFO phase=90 degrees) delay time	
	Dep (Depth)	0...30	Tap3 chorus depth	
	Lvl (Level)	0...30	Tap3 output level	
	Pan	L6...L1, C, R1...R6	Tap3 stereo image	
f	Tap4(270) [ms] (Tap4(270) [msec])	0...570msec	Tap4 (LFO phase=270 degrees) delay time	
	Dep (Depth)	0...30	Tap4 chorus depth	
	Lvl (Level)	0...30	Tap4 output level	
	Pan	L6...L1, C, R1...R6	Tap4 stereo image	
g	Tap1 Feedback	–100...+100	Tap1 feedback amount	D-mod
	Amt	–100...+100	Tap1 feedback amount and modulation amount	

16: Ensemble

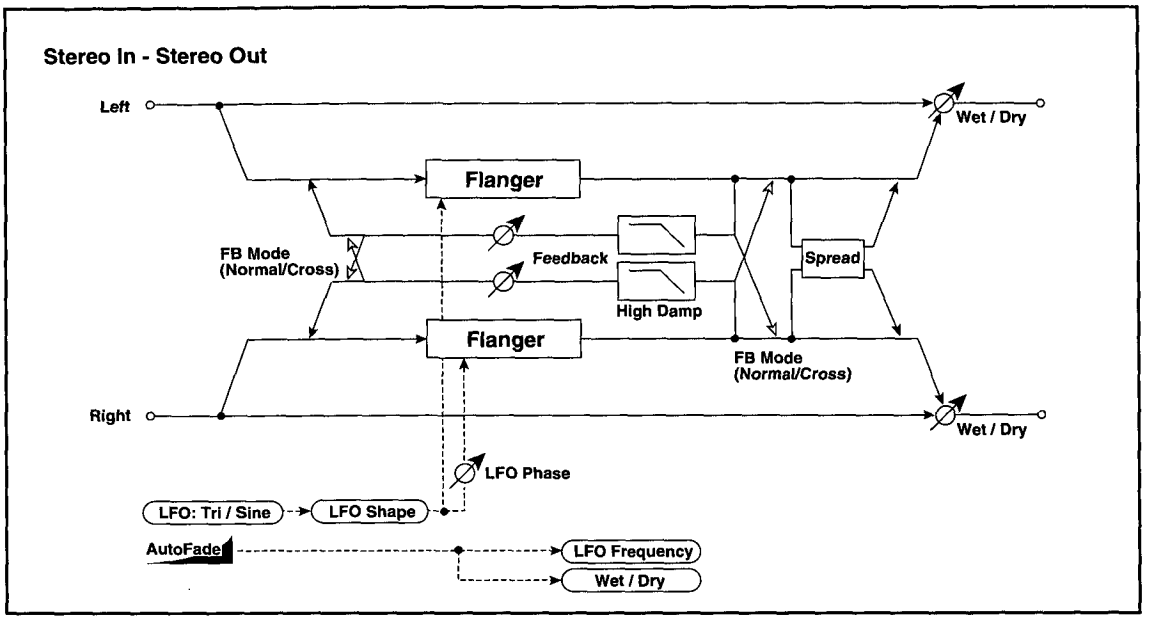
This Ensemble effect has three chorus blocks, and gives three dimensional depth and spread to the sound, because the signal is output from the left, right, and center.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Speed	1...100	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	Amt	−100...+100	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	−100...+100	Modulation amount of the LFO modulation depth	
d	Shimmer	0...100	Amount of shimmering of the LFO waveform ☞P.29	

17: St.Flanger (Stereo Flanger)

This is a stereo flanger. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other. The flanging effect can fade-in by means of the AutoFade function.

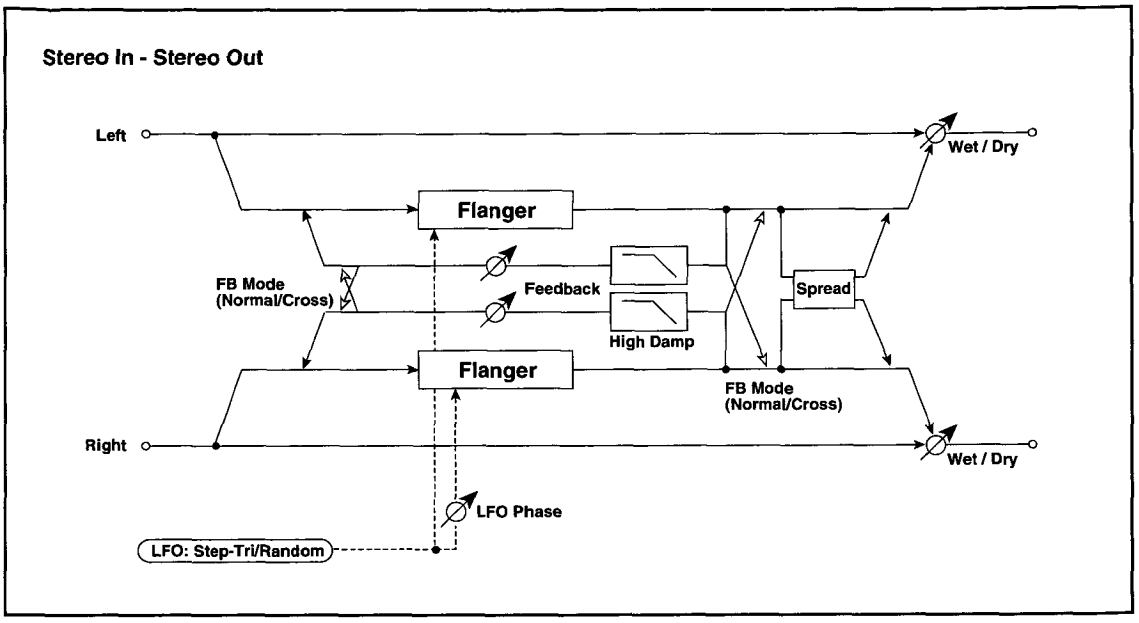


a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 30	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of effect balance. AutoFade is available	
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay from the original sound	
	Depth	0...100	Depth of LFO modulation	
c	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of LFO speed. AutoFade is available	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
f	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
g	FB Mode	Normal, Cross	Sets the feedback routing. ☞P.64	
	Spread	–100...+100	Sets the width of stereo image of effect sound. ☞P.60	
h	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

g: FB Mode This parameter sets the feedback routing. "Cross" will select a crossover flanger in which each channel applies feedback to the other channel.

18: St.Rndm Flang (St. Random Flanger)

This is a stereo flanger. The effect uses a step-shape waveform and random LFO for modulation, creating a unique flanging effect.

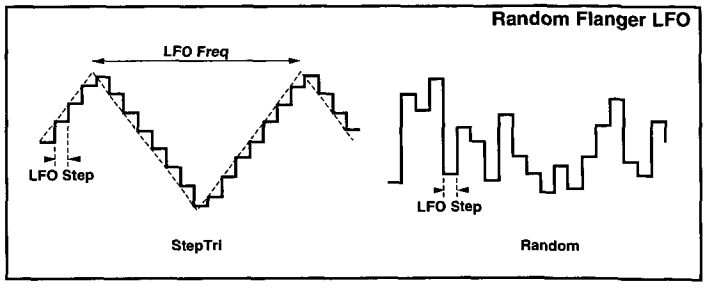


a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 30	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay from the original sound	
	Depth	0...100	Depth of LFO modulation	
c	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed ☞P.65	D-mod
	Src	None...Tempo	Modulation source used for both LFO speed and step speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Step[Hz] (LFO Step Freq [Hz])	0.05...50.00Hz	LFO step speed (speed that changes in steps) ☞P.65	D-mod
	A (Amt)	–50.00...+50.00Hz	Modulation amount of LFO step speed	
f	LFO Wavform (LFO Waveform)	StepTri (Step-Tri), Random	Selects the LFO Waveform. ☞P.65	
	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
g	FB Mode	Normal, Cross	Sets the feedback routing. ☞P.64	
	Spread	–100...+100	Sets the width of stereo image of effect sound. ☞P.60	

d: LFO Freq[Hz]
e: LFO Step[Hz]
f: LFO Wavform

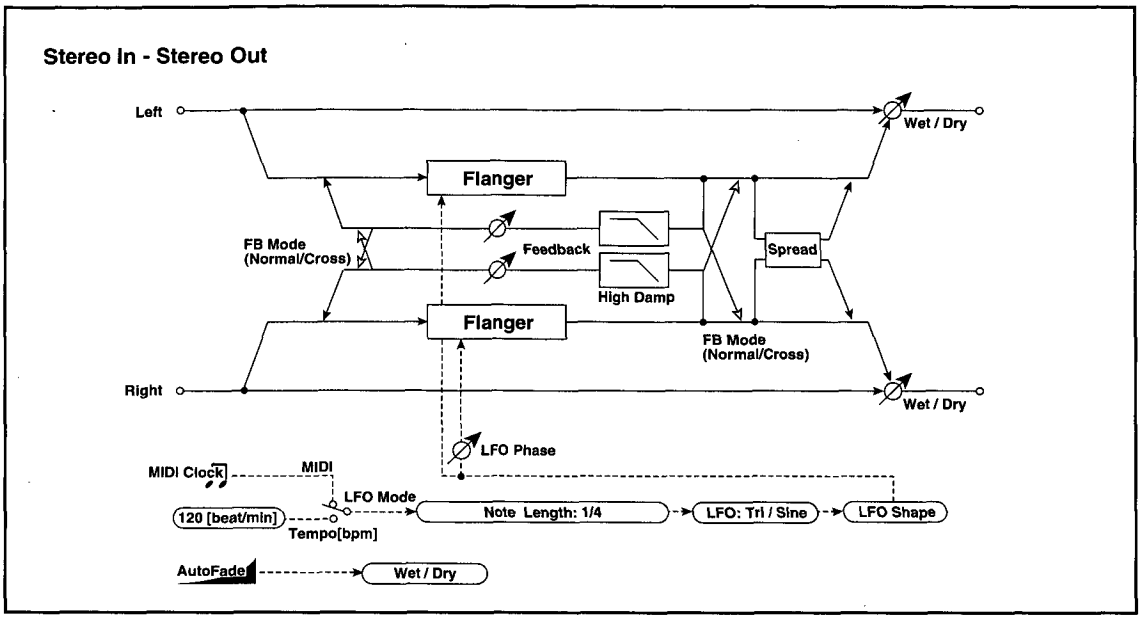
When StepTri is selected for LFO Wavform, the LFO uses a step-shape triangle waveform. Set the LFO Freq to the speed of the original triangle waveform. At this time, changing the LFO Step value will modify the width of the step.

When Random is selected for LFO Wavform, the LFO Step setting will be used as a cycle of the random LFO.



19: St.Tmpo Flang (St. Tempo Flanger)

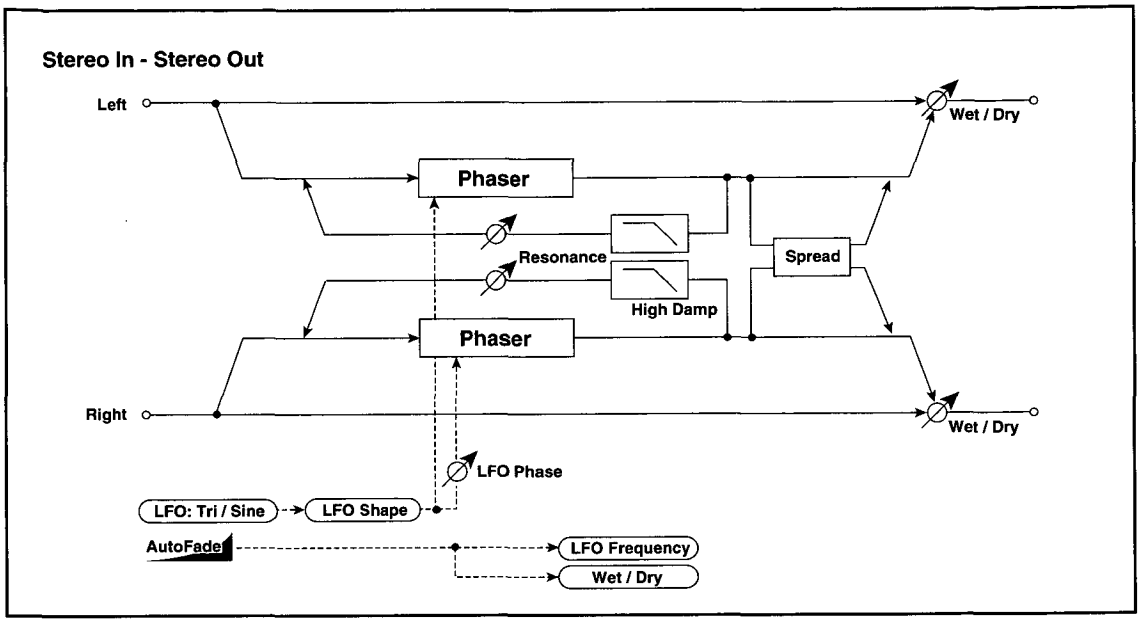
This is a stereo tempo flanger. The flanging effect can fade-in by means of the AutoFade function.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 30	D-mod
	Src	None...A.FADE (AUTO-FADE)	Modulation source of effect balance. AutoFade is available	AutoFade
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay from the original sound	
	Depth	0...100	Depth of LFO modulation	
c	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
d	LFO Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.31	
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.31	
e	Note Length (Length)	1...16 / 1...16	Sets the LFO cycle. LFO Cycle = Note Length x Whole Note. ☞P.31	
f	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
g	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
h	FB Mode	Normal, Cross	Sets the feedback routing. ☞P.64	
	Spread	–100...+100	Sets the width of stereo image of effect sound. ☞P.60	
i	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

20: St.Phaser (Stereo Phaser)

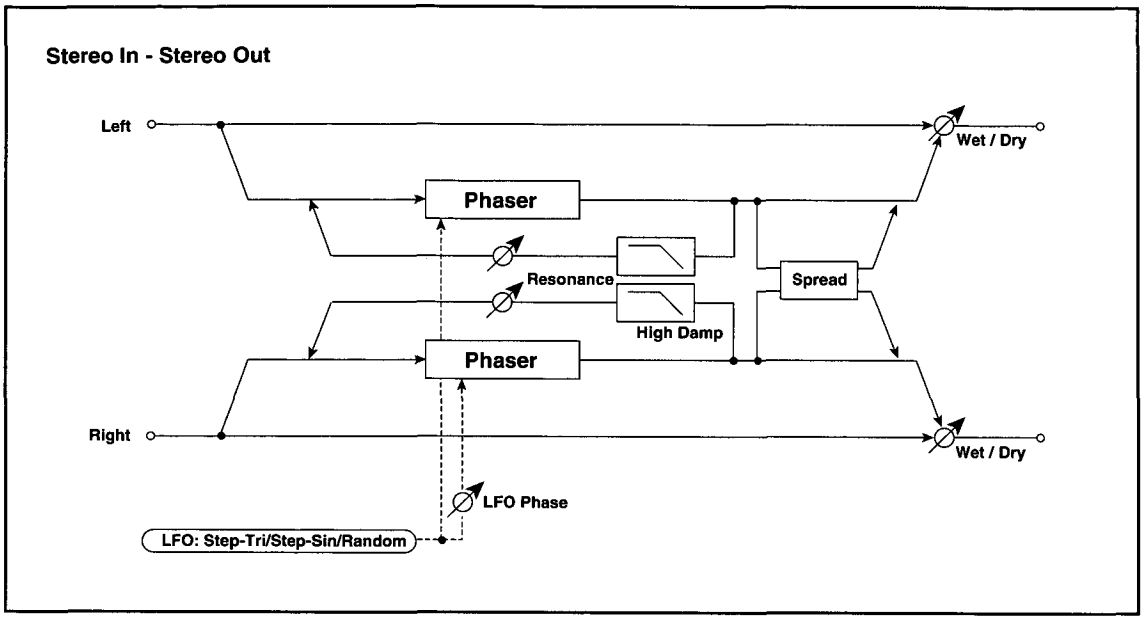
This is a stereo phaser. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other. The phaser effect can fade-in by means of the AutoFade function.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 33	D-mod AutoFade
	Src	None...A.FADE (AUTO-FADE)	Modulation source of effect balance. AutoFade is available	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual	0...100	Sets the frequency to which the effect is applied.	
	Depth	0...100	Depth of LFO modulation	
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33	
	High Damp[%]	0...100%	Resonance damping amount in the high range ☞P.33	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod AutoFade
	Src	None...A.FADE (AUTO-FADE)	Modulation source of LFO speed. AutoFade is available	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
f	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
	Spread	–100...+100	Sets the width of stereo image of effect sound. ☞P.60	
g	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

21: St.RndmPhaser (St. Random Phaser)

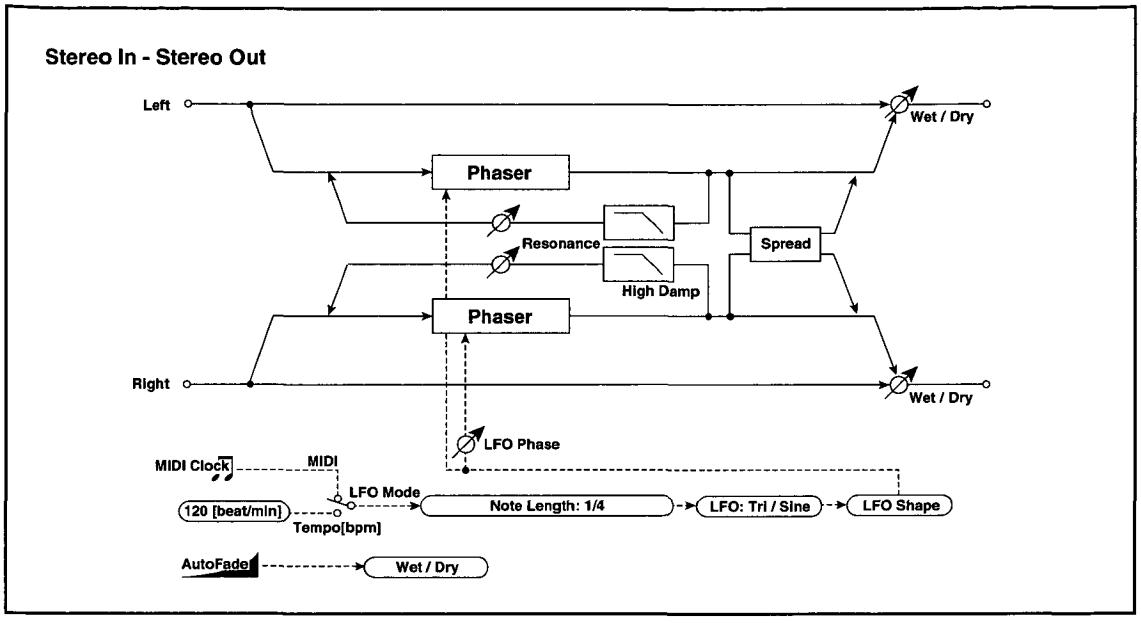
This is a stereo phaser. The effect uses a step-shape waveform and random LFO for modulation, creating a unique phasing effect.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 33	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual	0...100	Sets the frequency to which the effect is applied.	
	Depth	0...100	Depth of LFO modulation	
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33	
	High Damp[%]	0...100%	Resonance damping amount in the high range ☞P.33	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed ☞P.65	D-mod
	Src	None...Tempo	Modulation source commonly used for LFO speed and step speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Step[Hz] (LFO Step Freq [Hz])	0.05...50.00Hz	LFO step speed ☞P.65	D-mod
	A (Amt)	–50.00...+50.00Hz	Modulation amount of LFO step speed	
f	LFO Wavform (LFO Waveform)	StepTri (Step-Tri), StepSin (Step-Sin), Random	Selects the LFO Waveform. ☞P.65	
	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
g	Spread	–100...+100	Sets the width of stereo image of effect sound. ☞P.60	

22: St.TmpoPhaser (St. Tempo Phaser)

This is a stereo tempo phaser. The phasing effect can fade-in by means of the AutoFade function.

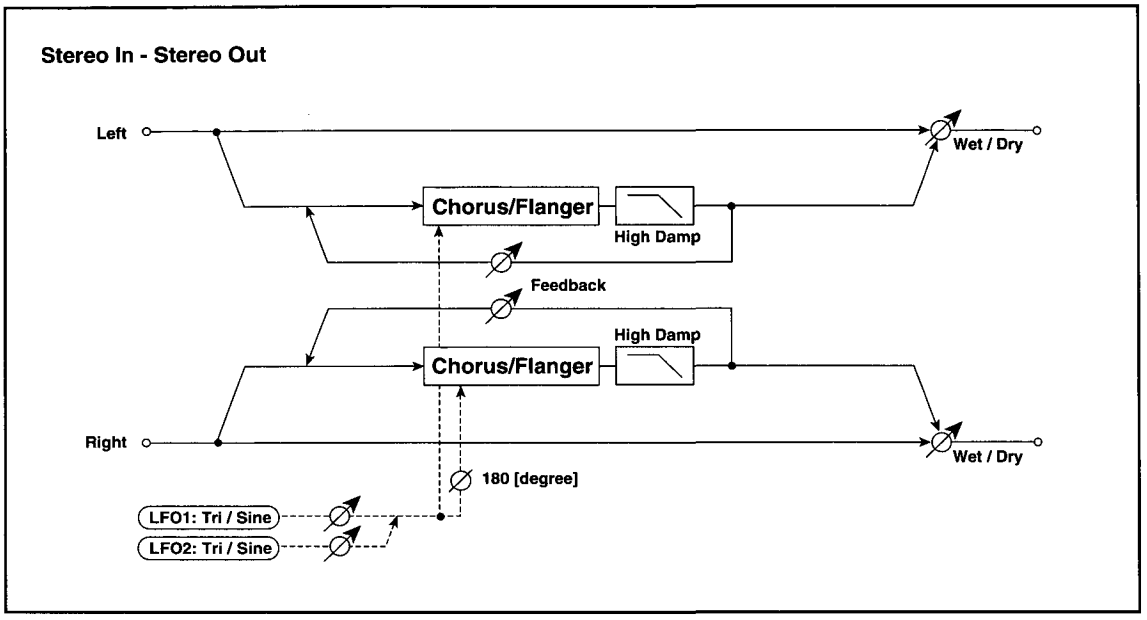


a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 33
	Src	None...A.FADE (AUTOFADE)	Modulation source of effect balance. AutoFade is available
	Amt	–100...+100	Modulation amount of effect balance
b	Manual	0...100	Sets the frequency to which the effect is applied.
	Depth	0...100	Depth of LFO modulation
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33
	High Damp[%]	0...100%	Resonance damping amount in the high range ☞P.33
d	LFO Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.31
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.31
e	Note Length (Length)	1...16 / 1...16	Sets the LFO cycle. LFO Cycle = Note Length x Whole Note. ☞P.31
f	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30
g	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60
	Spread	–100...+100	Sets the width of stereo image of effect sound. ☞P.60
h	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54
	Fade-In Rate	1...100	Sets the rate of fade-in.

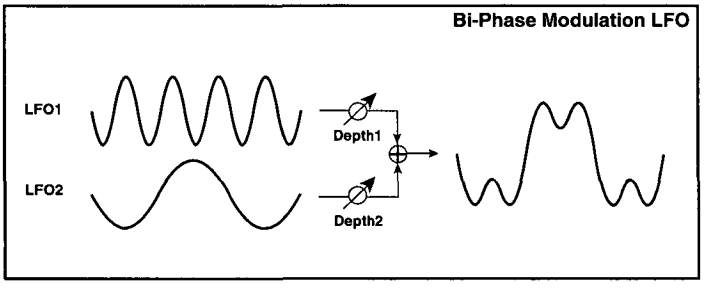
D-mod AutoFade

23: St.Bi-phasMod (St. Bi-phase Mod.)

This stereo chorus effect adds two different LFOs together. You can set the Frequency and Depth parameters for each LFO individually. Depending on the setting of these LFOs, very complex waveforms will create an analog-type, unstable modulated sound.

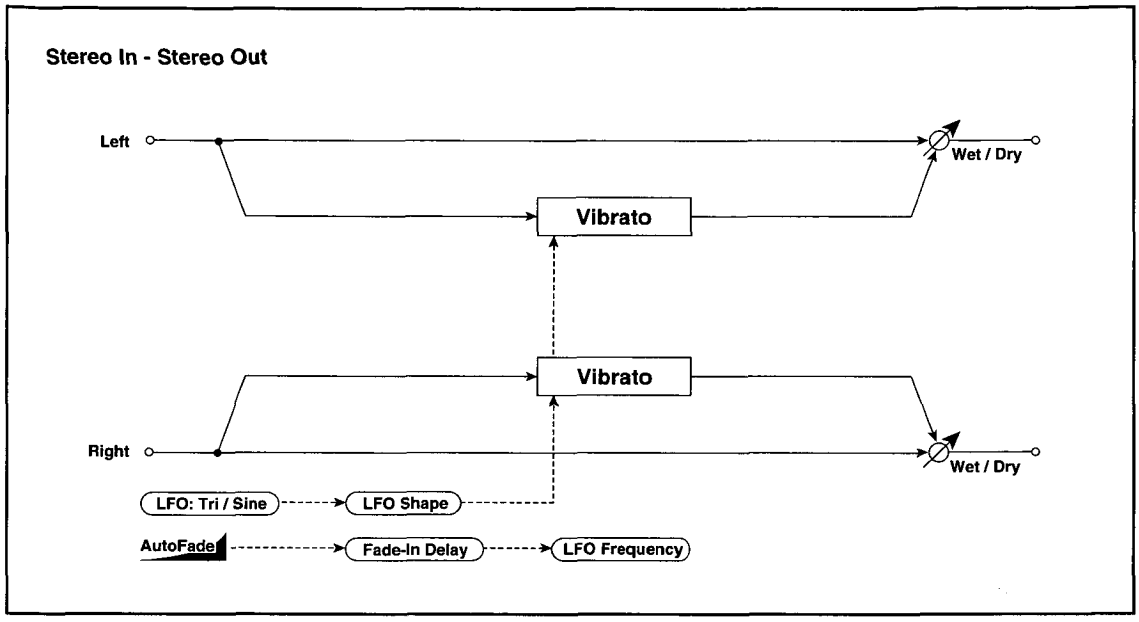


a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod
	Src	None...Tempo	Modulation source of effect balance.	
	Amt	–100...+100	Modulation amount of effect balance	
b	L Pre Dly[ms] (L Pre Delay [msec])	0.0...50.0msec	Left channel delay time ☞P.59	
	R Pre Dly[ms] (R Pre Delay [msec])	0.0...50.0msec	Right channel delay time ☞P.59	
c	LFO1Freq[Hz] (LFO1 Frequency [Hz])	0.02...30.00Hz	LFO1 speed	D-mod
	Src	None...Tempo	Modulation source of LFO1&2 speed	
	A (Amt)	–30.00...+30.00	Modulation amount of LFO1 speed	
d	LFO2 Freq[Hz] (LFO2 Frequency [Hz])	0.02...30.00Hz	LFO2 speed	D-mod
	A (Amt)	–30.00...+30.00	Modulation amount of LFO2 speed	
e	Depth1	0...100	Depth of LFO1 modulation	D-mod
	Src	None...Tempo	Modulation source of LFO1&2 modulation depth	
	Amt	–100...+100	Modulation amount of LFO1 modulation depth	
f	Depth2	0...100	Depth of LFO2 modulation	D-mod
	Amt	–100...+100	Modulation amount of LFO2 modulation depth	
g	Feedback	–100...+100	Feedback amount ☞P.28	
	High Damp[%]	0...100%	High range damping amount	
h	LFO1 Waveform	Tri (Triangle), Sine	Selects LFO1 waveform.	
	LFO2 Waveform	Tri (Triangle), Sine	Selects LFO2 waveform.	
i	LFO PhaseSW (LFO Phase Sw)	0deg (0 degree), 180deg (180 degree)	Switches the LFO phase difference between left and right.	



24: St.Vibrato (Stereo Vibrato)

This is a stereo vibrato. You can set a delay for the time that is taken before the auto-fade starts.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...A.FADE (AUTOFADE)	Modulation source of LFO speed. AutoFade is available.	AutoFade
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation depth of the LFO modulation depth	
d	LFO Waveform	Tri (Triangle), Sine	Selects the LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform shape is changed. ☞P.30	
e	AUTOFADE Src	None...Tempo	Sets the modulation source that starts AutoFade. ☞P.71	
	Fade-In Rate	1...100	Sets the rate of fade-in.	
f	FadeIn Dly[ms] (Fade-In Delay [msec])	00...2000msec	Sets delay time for fade-in. ☞P.71	

e: AUTOFADE Src
e: Fade-In Rate
f: FadeIn Dly[ms]

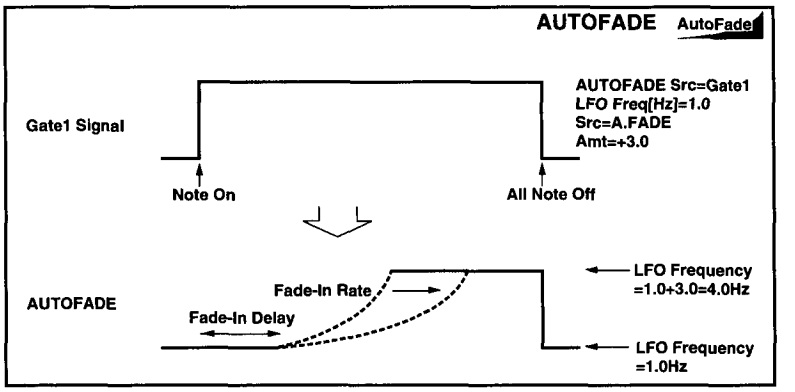
If A.FADE is selected for the LFO speed, you can use the AutoFade function to apply modulation.

The AUTOFADE Src parameter selects the modulation source that triggers AutoFade. The Fade-in Rate parameter specifies the rate of fade-in. The FadeIn Dly parameter determines the time from AutoFade modulation source ON until the fade-in starts.

MIDI The effect is off when a value for the dynamic modulation source specified for the AUTOFADE Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.

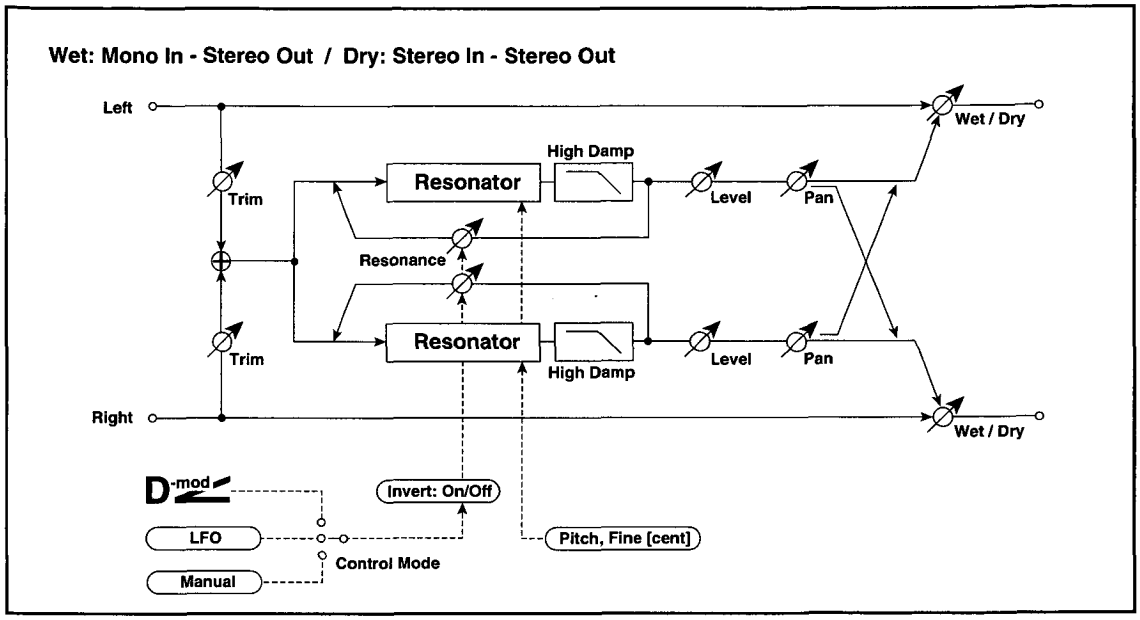
The following is an example of fade-in where the LFO speed is increased from "1.0Hz" to "4.0Hz" when a note-on message is received.

e: AUTOFADE Src = Gate1
b: LFO Freq[Hz] = 1.0
b: Src = A.FADE
b: Amt = 3.0



25: 2-Voice Reso. (2-Voice Resonator)

This resonator has two resonance points. You can set the output level and stereo image (pan) for each resonator.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Voice1 Pitch	C0...B8	Voice1 Pitch for resonance	
	Voice2 Pitch	C0...B8	Voice2 Pitch for resonance	
c	V1 Fine[cent] (Fine [cent])	–50...+50	Fine adjustment of Voice1 pitch for resonance	
	V2 Fine[cent] (Fine [cent])	–50...+50	Fine adjustment of Voice2 pitch for resonance	
d	Control Mode	Manual, LFO, D-mod	Switches the controls of resonance intensity. ☞P.74	D-mod
	V1/V2 Mod Invert (LFO/D-mod Invert)	Off, On	Reverses the Voice 1 and 2 control when LFO/D-mod is selected. ☞P.74	
e	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	
	D-mod Src	None...Tempo	Modulation source that controls resonance intensity ☞P.74	
f	Mod. Depth	–100...+100	Amount of resonance intensity control via LFO/D-mod	
	Trim	0...100	Input level at the Resonator	
g	V1 Resonance (Voice1: Resonance)	–100...+100	Sets the intensity of resonance when Control Mode = Manual. ☞P.74	
	V2 Resonance (Voice2: Resonance)	–100...+100	Sets the intensity of resonance when Control Mode = Manual. ☞P.74	
h	V1 High Damp[%] (High Damp [%])	0...100%	Damping amount of resonant sound in the high range ☞P.37	
	V2 High Damp[%] (High Damp [%])	0...100%	Damping amount of resonant sound in the high range ☞P.37	
i	Voice1 Level	0...100	Voice1 output level	
	Voice2 Level	0...100	Voice2 output level	
j	Voice1 Pan (Pan)	L6...R6	Voice1 stereo image	
	Voice2 Pan (Pan)	L6...R6	Voice2 stereo image	

d: Control Mode
e: D-mod Src
g: V1 Resonance
g: V2 Resonance

This parameter determines whether the resonance intensity is controlled by the LFO or not.

When Control Mode = Manual, the Resonance parameter sets the intensity of resonance. If the Resonance parameter has a negative value, harmonics will be changed, and resonance will occur at a pitch one octave lower.

When Control Mode = LFO, the intensity of resonance varies according to the LFO. The LFO sways between positive and negative values, causing resonance to occur between specified pitches an octave apart in turn.

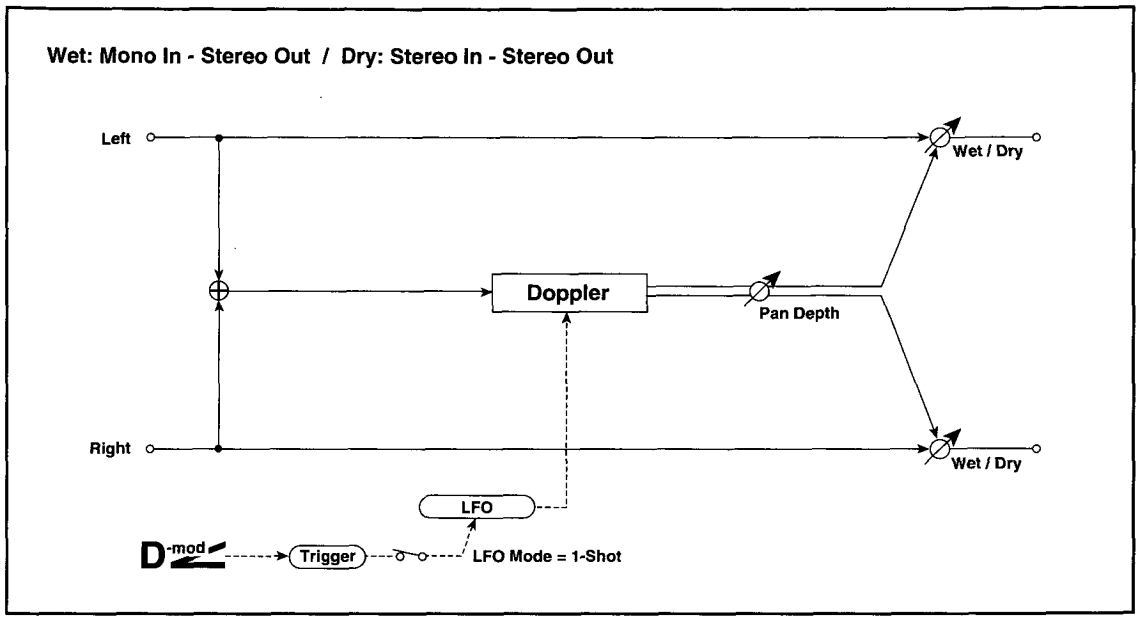
When Control Mode = D-mod, the resonance is controlled by the dynamic modulation source. If JS (X) or RbX#16 is assigned as the modulation source, the pitch an octave higher and lower can be controlled, similar to when LFO is selected for Control Mode.

d: V1/V2 Mod Invert

When Control Mode = LFO or D-mod, the controlled phase of either Voice 1 or 2 will be reversed. When the resonance pitch is set for Voice 1 (Resonance has a positive value), Voice 2 will resonate at a pitch an octave below (Resonance has a negative value).

26: Doppler

This effect simulates a "Doppler effect" (sound moving while changing its pitch) that sounds, for example, like an ambulance siren passing by. Mixing the effect sound with the dry sound will create a special chorus effect.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
c	LFO Mode	Loop, 1-Shot	Switches LFO operation mode. ☞P.75	
	1-Shot Src (Src)	None...Tempo	When LFO Mode is set to 1-Shot, this modulation source triggers the LFO.	D-mod
d	Pitch Depth	0...100	Pitch variation of the moving sound ☞P.75	D-mod
	Src	None...Tempo	Modulation source of pitch variation	
	Amt	–100...+100	Modulation amount of pitch variation	
e	Pan Depth	–100...+100	Panning of the moving sound ☞P.76	D-mod
	Src	None...Tempo	Modulation source of panning	
	Amt	–100...+100	Modulation amount of panning	

c: LFO Mode
c: 1-Shot Src

The LFO Mode parameter switches LFO operation mode. When Loop is selected, the Doppler effect will be created repeatedly.

When LFO Mode is set to 1-Shot, the Doppler effect is created only once when the modulation source specified in the Src field is turned on. At this time if you do not set the Src parameter, the Doppler effect will not be created, and no effect sound will be output.

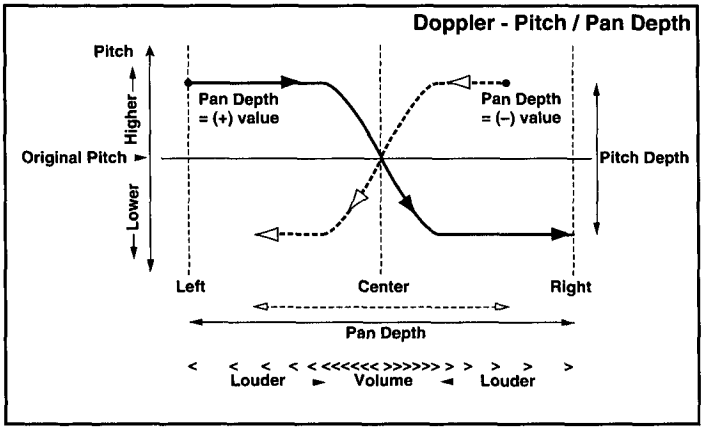
MIDI The effect is off when a value for the modulation source specified for the Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Doppler effect is triggered when the value changes from 63 or smaller to 64 or higher.

d: Pitch Depth

With the Doppler effect, the pitch is raised when the sound approaches, and the pitch is lowered when the sound goes away. This parameter sets this pitch variation.

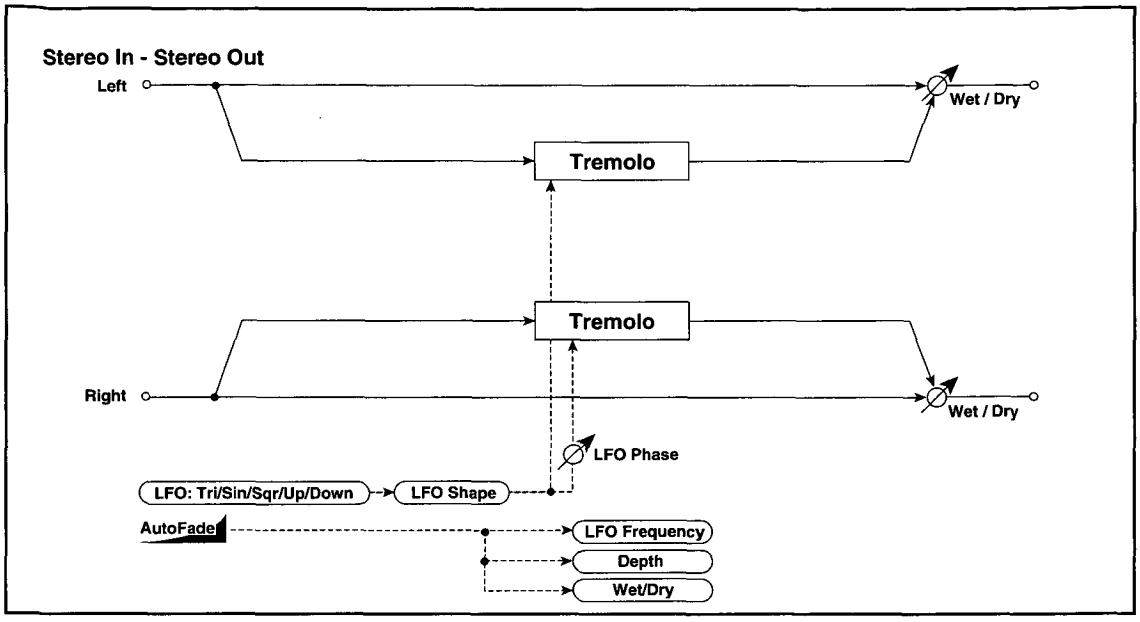
e: Pan Depth

This parameter sets the width of the stereo image of the effect sound. With larger values, the sound seems to come and go from much further away. With positive values, the sound moves from left to right; with negative values, the sound moves from right to left.



27: St.Tremolo (Stereo Tremolo)

This is a stereo tremolo. You can create sound panning to left and right by offsetting the phase of the left and right LFOs from each other. The tremolo effect can fade-in by means of the AutoFade function.

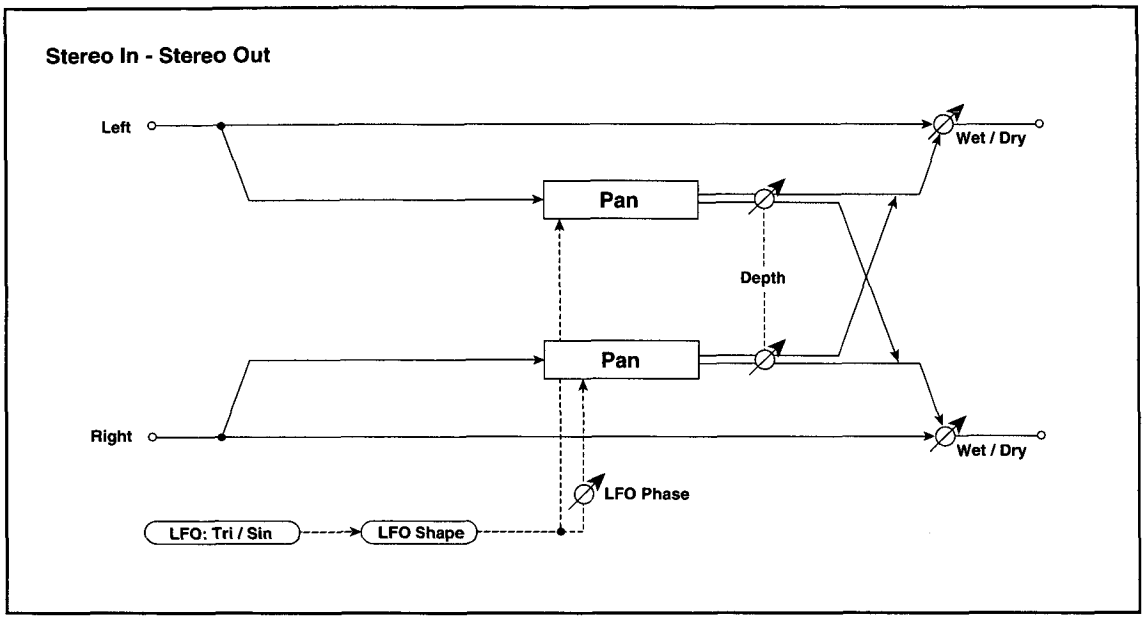


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of effect balance. AutoFade is available.	
	Amt	−100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of LFO speed. AutoFade is available.	
	A (Amt)	−20.00...+20.00Hz	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod AutoFade
	Src	None...A.FADE (AUTOFADE)	Modulation source of the depth of modulation. AutoFade is available.	
	Amt	−100...+100	Modulation amount of the depth of modulation	
d	LFO Waveform	Tri (Triangle), Sine, Square, Up, Down	Selects LFO Waveform. ☞P.39	
	LFO Shape	−100...+100	Determines how much the LFO waveform is changed. ☞P.30	
e	LFO Phase[deg] (LFO Phase [degree])	−180...+180	LFO phase difference between the left and right ☞P.77	
f	AUTOFADE Src	None...Tempo	Selects the modulation source that triggers AutoFade. ☞P.54	
	Fade-In Rate	1...100	Sets the rate of fade-in.	

e: LFO Phase[deg] This parameter determines the difference between the left and right LFO phases. A higher value will simulate the auto-pan effect in which the sound is panned between left and right.

28: St.Auto Pan (Stereo Auto Pan)

This Auto Pan effect pans sound between left and right. It is stereo, and shifting the left and right LFO phases from each other will simulate the sound of the left and right channels crossing over each other by turns, or chasing each other.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the depth of modulation	
	Amt	–100...+100	Modulation amount of the depth of modulation	
d	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30, 78	
e	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.78	

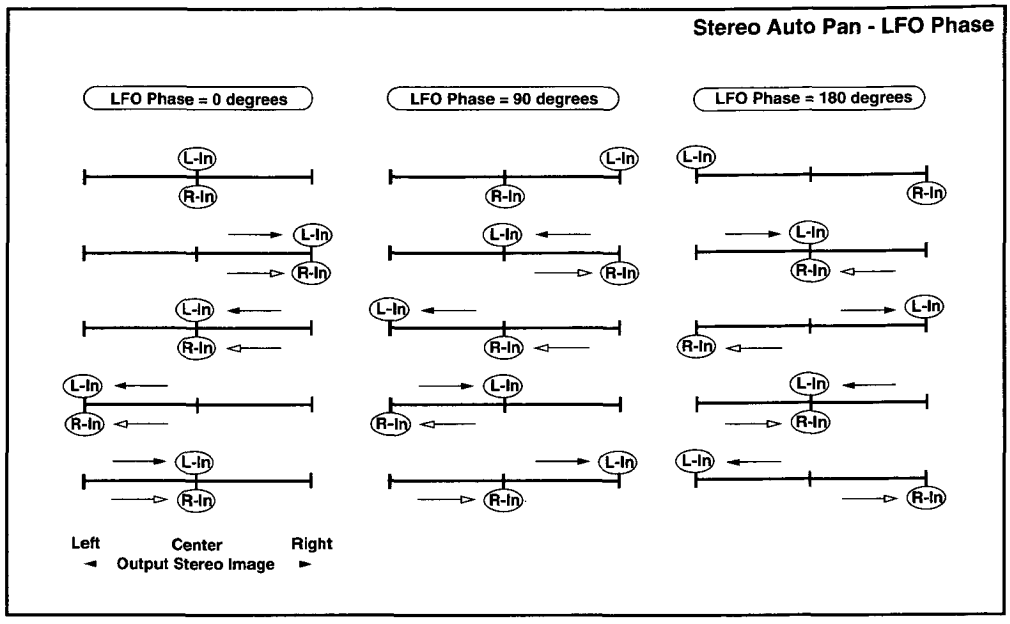
d: LFO Shape

You can change the panning curve by modifying the LFO waveform.

e: LFO Phase

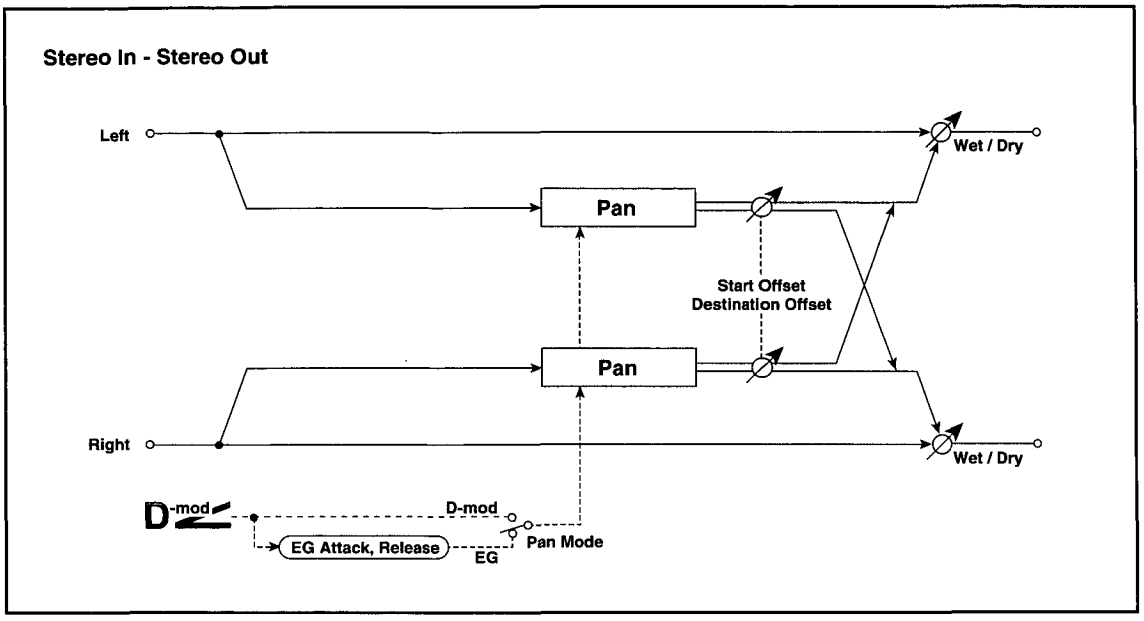
This parameter determines the difference in the left and right LFO phases. When you change the value gradually from "0", the sound from the left and right channels will chase each other around. If you set the parameter to +180 or –180, the sound from each channel will cross over each other.

You need to input different sounds to each channel in order for this parameter to be effective.


Stereo Auto Pan - LFO Phase
LFO Phase = 0 degrees
LFO Phase = 90 degrees
LFO Phase = 180 degrees
L-In
R-In
Left
Center
Right
Output Stereo Image

29: St.Env.Pan (St. Envelope Pan)

This stereo Pan uses the envelope generator to pan sound to the left and right. You can also control the panning directly using a modulation source.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Pan Mode	EG, D-mod	Switches panning mode. ☞P.80	D-mod
	Src	None...Tempo	When Pan Mode = EG, this selects the modulation source that triggers the EG. When Pan Mode = D-mod, it selects the modulation source that controls the pan. ☞P.80	
c	EG Attack	1...100	Attack rate of Envelope Generator ☞P.81	
	EG Release	1...100	Release rate of Envelope Generator. ☞P.81	
d	L StartOffset (Lch Start Offset)	L, 1...99, R	Initial panning value for the left channel ☞P.81	
	L Dest.Offset (Destination Offset)	L, 1...99, R	Target panning value for the left channel	
e	R StartOffset (Rch Start Offset)	L, 1...99, R	Initial panning value for the right channel ☞P.81	
	R Dest.Offset (Destination Offset)	L, 1...99, R	Target panning value for the right channel	

b: Pan Mode

This parameter selects whether the panning effect is controlled by the Envelope Generator, or directly by the modulation source.

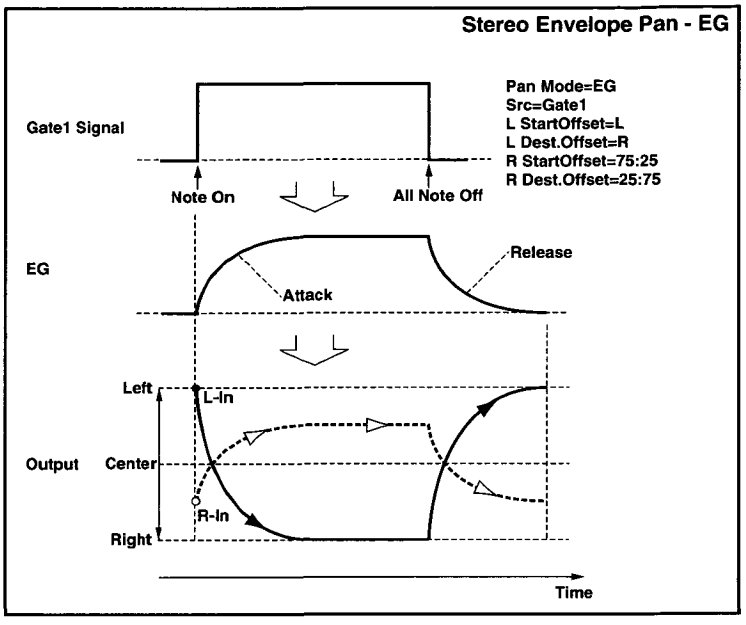
b: Src

With Pan Mode = EG, this parameter specifies the modulation source that starts the envelope. This envelope generator is included in the Stereo Envelope Pan, and is not related to the Oscillator EG, Filter EG, or Amp EG. If you select, for example, Gate, the envelope generator will start when a note-on message is received.

MIDI The effect is off when a value for the modulation source specified for the Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Envelope Generator is triggered when the value changes from 63 or smaller to 64 or higher.

With Pan Mode = D-mod, you can control panning directly using the modulation source specified in the Src field.

c: EG Attack
c: EG Release



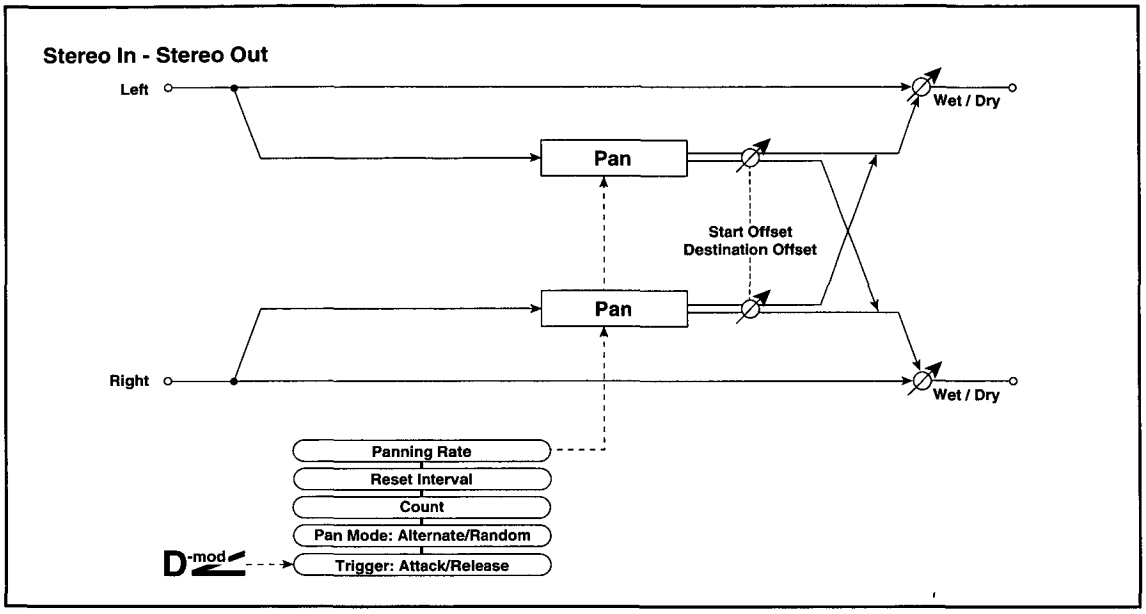
d: L StartOffset
d: L Dest.Offset
e: R StartOffset
e: R Dest.Offset

When Pan Mode = EG, the StartOffset parameter sets the panning at the start of the Envelope Generator. Dest.Offset sets the panning for the sustain period.

When Pan Mode = D-mod, StartOffset specifies the pan setting when the modulation source value is 0. Dest.Offset sets the pan setting when the modulation source value is maximum.

30: St.Dyna Pan (Stereo Dyna Pan)

This effect counts the number of times the modulation source is turned on/off, and switches the panning mode. You can create a panning effect that changes according to phrases you play on the keyboard. It is very effective for solos. You can also route this effect after a delay effect so that the delay sound will be panned gradually.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Trigger Src (Trigger Source)	None...Tempo	Selects the modulation source for counting on/off times. ☞P.82	D-mod
	Trigger (Trigger Direction)	Attack, Release	Determines whether the on or off time is counted. ☞P.82	
c	Pan Mode (Panning Mode)	Alternate, Random	Switches between Alternate and Random panning mode. ☞P.83	
	Count	1...16	Determines the number of times the on/off operation is counted until panning mode is changed. ☞P.82	
d	Panning Rate	1...100	Sets the panning rate. ☞P.83	
	Src	None...Tempo	Modulation source of panning rate	D-mod
	Amt	–100...+100	Modulation amount of panning rate	
e	Reset Interval	0...100	Time taken to reset panning and on/off counting ☞P.83	
f	L StartOffset (Lch Start Offset)	L, 1...99, R	Initial panning value for the left channel ☞P.83	
	L Dest.Offset (Destination Offset)	L, 1...99, R	Target panning value for the left channel	
g	R StartOffset (Rch Start Offset)	L, 1...99, R	Initial panning value for the right channel ☞P.83	
	R Dest.Offset (Destination Offset)	L, 1...99, R	Target panning value for the right channel	

b: Trigger Src
b: Trigger
c: Count

When Trigger = Attack, the effect counts how many times the modulation source (specified in the Trigger Src field) is turned on. When Trigger = Release, the effect counts how many times the source is turned off.

If the number of count exceeds the "Count" value, panning will be switched. If Gate is selected as the modulation source, you can set panning according to phrases you play on the keyboard.

MIDI The effect is off when the value for the modulation source specified for the Trigger Src parameter is smaller than 64, and the effect is on when the value is 64 or higher. When Trigger is set to Attack, the number of times this value changes from 63 or smaller to 64 or higher (Off→On) will be counted. When Trigger is set to Release, the number of times this value changes from 64 or higher to 63 or smaller (On→Off) will be counted.

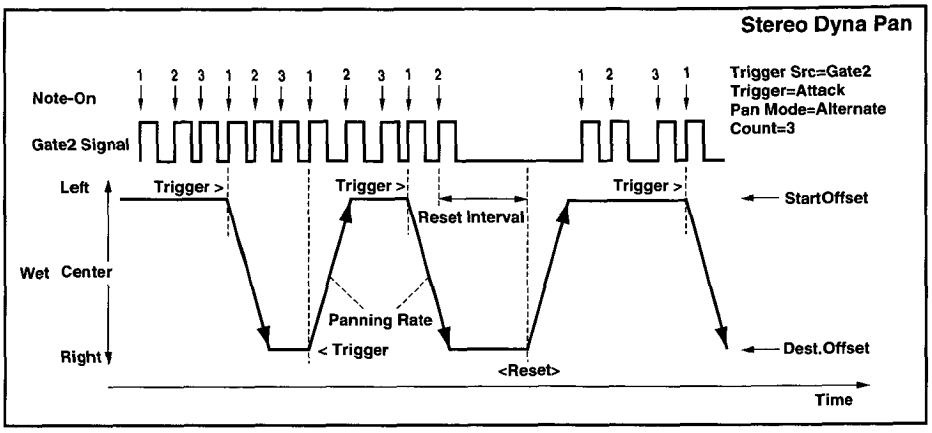
c: Pan Mode
f: L StartOffset
f: L Dest.Offset
g: R StartOffset
g: R Dest.Offset

When Pan Mode = Alternate, the panning setting will change from the StartOffset value to the Dest.Offset value, then to the StartOffset value again.

When Pan Mode = Random, the panning setting will change randomly between the Start-Offset value and Dest.Offset value.

An example of setting to pan every third Note On message:

b: Trigger Src = Gate2
b: Trigger = Attack
c: Pan Mode = Alternate
b: Count = 3



d: Panning Rate

This parameter determines how fast panning is switched. A smaller value will cause panning to move more slowly.

If you wish to combine a delay effect to pan the delay sound, you should adjust this parameter so that it will match the delay time and feedback.

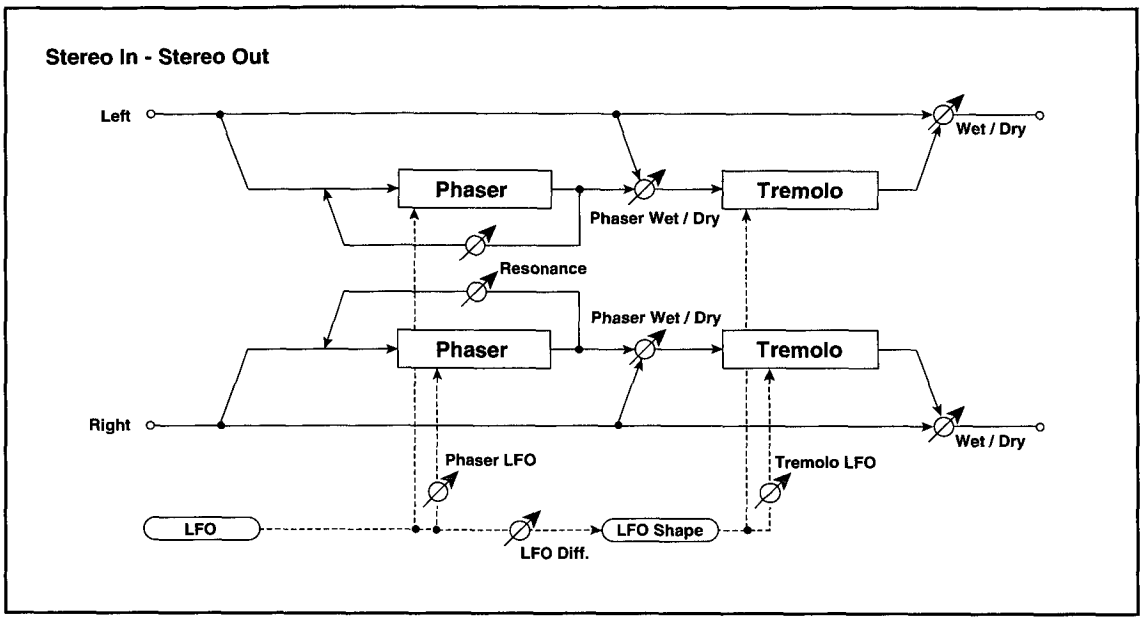
e: Reset Interval

If the modulation source (specified in the Trigger Src field) remains off for a while, the number of counts will be reset and the panning setting will go back to the StartOffset value. (However, when Pan Mode = Random, it will not go back to the StartOffset value.) The Reset Interval parameter sets this interval. With a larger value, the interval will become longer. If this value is too small, very slow panning will be reset before it is switched. In this case, set this parameter to a larger value.

If you set this interval to the same period of time as between the phrases, panning and counting will start from the beginning at the start of the phrase.

31: Phaser+Tremlo (Phaser+Tremolo)

This effect links a stereo phaser LFO and a tremolo LFO. Swelling created by the phaser and shimmering created by the tremolo are synchronized, making a pleasant modulation. It works well with electric piano sounds.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds. ☞P.84	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	*None...Tempo*	*Modulation source of LFO speed*	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
c	Phaser Manual	0...100	Sets the frequency to which the effect is applied.	
	Phaser Reso. (Phaser Resonance)	–100...+100	Sets the resonance amount.	
d	Phaser Depth	0...100	Depth of Phaser LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the phaser modulation depth	
	Amt	–100...+100	Modulation amount of the phaser modulation depth	
e	PhaserLFO[deg] (Phaser LFO [degree])	–180...+180	The difference between the left and right phases of the phaser. ☞P.85	
	PhaserWet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the phaser effect and dry sounds. ☞P.23, 84	
f	*Tremolo Depth*	0...100	Depth of Tremolo LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the tremolo modulation depth	
	Amt	–100...+100	Modulation amount of the tremolo modulation depth	
g	Trml LFO Shape (Tremolo LFO Shape)	–100...+100	Sets how much the Tremolo LFO shape is modulated. ☞P.30	
	Trml LFO[deg] (Tremolo LFO [degree])	–180...+180	The difference between the left and right phases of the tremolo. ☞P.85	
h	LFO Diff.[deg] (Diff Tremolo<>Phaser)	–180...+180	The difference between Tremolo LFO phase and Phaser LFO phase.	

a: Wet/Dry
e: PhaserWet/Dry

PhaserWet/Dry sets the balance between the phaser output and the dry sound.

On the other hand, Wet/Dry sets the balance between the final output of Phaser plus Tremolo, and the dry sound.

e: PhaserLFO[deg]
g: Trml LFO[deg]
h: LFO Diff.[deg]

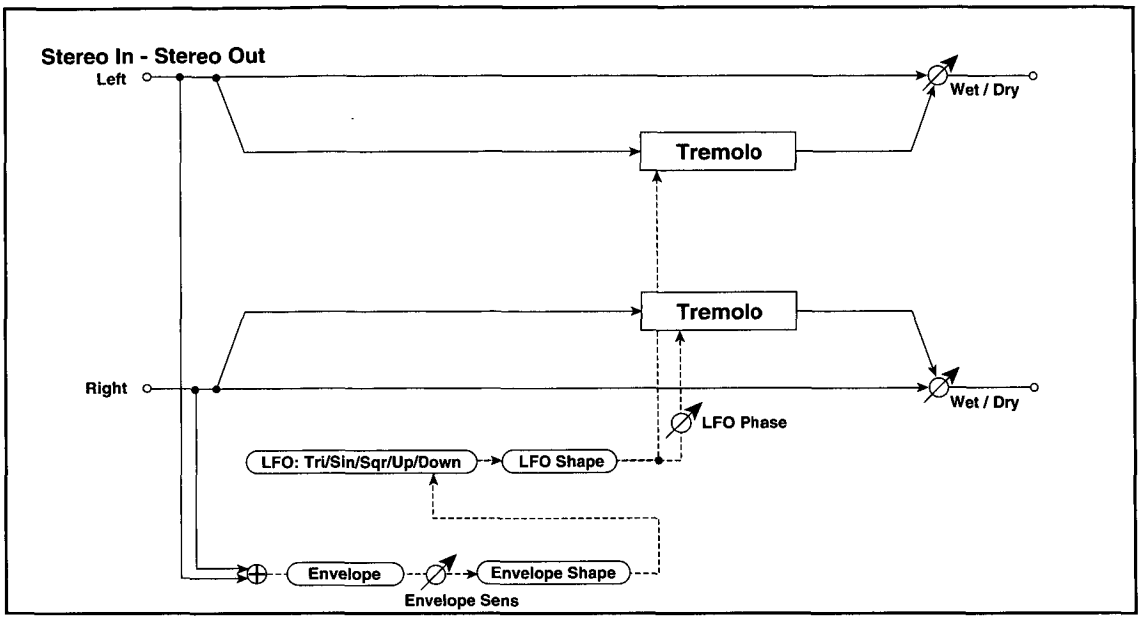
The PhaserLFO and Trml LFO determine the right and left phase difference respectively.

PhaserLFO is used to control the spread of the phaser effect, and Trml LFO is used to control the tremolo effect that is shimmering between left and right.

The LFO Diff.[deg] the phase difference of the Phaser and Tremolo. Controlling the relationship between the Phaser and Tremolo will allow you to adjust the feel of sound movement and rotation.

32: Shimmer

This effect controls a stereo tremolo based on the input signal level. You can create an effect in which the shimmering becomes larger and fades away as the volume level becomes lower.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	*Envelope Sens*	0...100	*Sets the sensitivity of the input signal envelope.*	
	Envelope Shape	–100...+100	Sets the envelope curve of the input signal.	
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed ☞P.86	
	Env. Amt[Hz] (Envelope Amount [Hz])	–20.00...+20.00Hz	Changes LFO speed according to the input signal level	
d	Depth	0...100	Depth of LFO modulation ☞P.86	
	Env. Amt (Envelope Amount)	–100...+100	Changes the modulation depth according to the input signal level	
e	LFO Waveform	Tri (Triangle), Sine, Square, Up, Down	Selects LFO waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform shape is modified. ☞P.30	
f	LFO Phase[deg] (LFO Phase [degree])	–180...+180	The difference between the left and right LFO phase. ☞P.77	

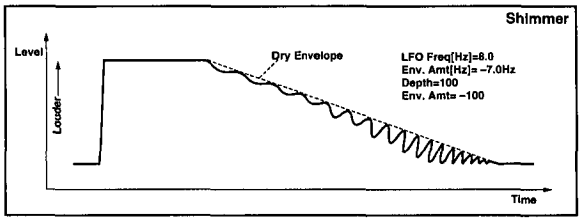
c: LFO Freq[Hz]
c: Env. Amt[Hz]
d: Depth
d: Env. Amt

These parameters are used to set the modulation applied based on the envelope (input signal level).

LFO speed is the LFO Freq added by the Env. Amt multiplied by the input signal level. The Depth value is also obtained by adding the Depth value to the Env. Amt multiplied by the input signal level.

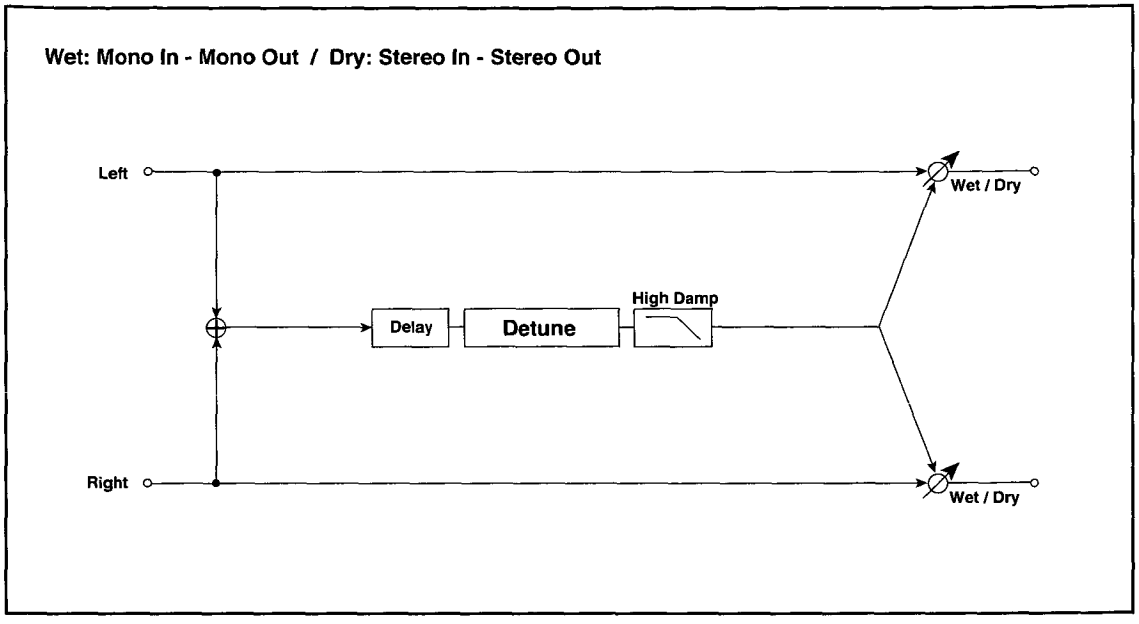
Setting example: The maximum input level will produce 1.0Hz, Depth = 0. An input level of "0" will produce 8.0Hz, Depth = 100:

c: LFO Freq[Hz] = 8.0
c: Env. Amt[Hz] = –7.0
d: Depth = 100
d: Env. Amt = –100



33: Detune

Using this effect, you can obtain a detune effect that offsets the pitch of the effect sound slightly from the pitch of the input signal. Compared to the chorus effect, a more natural sound thickness will be created.

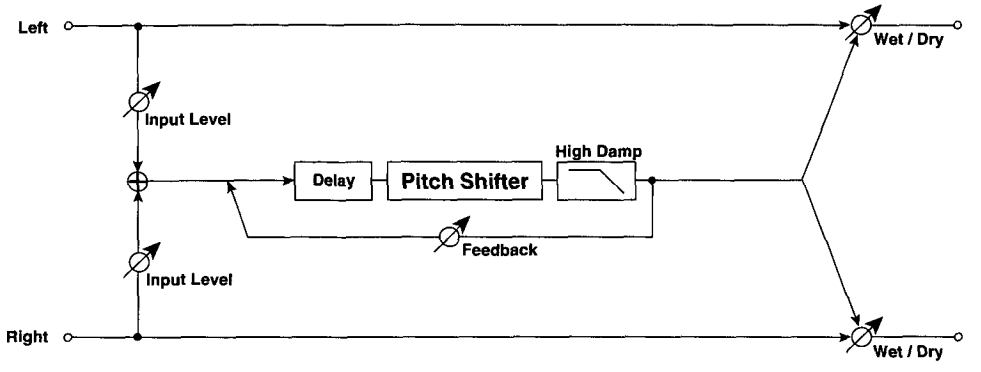


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	PitchSft[cent] (Pitch Shift [cent])	–100...+100cent	The difference between the input signal pitch and effect sound pitch.
	Src	None...Tempo	Modulation source of the pitch shift
	Amt	–100...+100cent	Modulation amount of the pitch shift
c	Delay Time[ms] (Delay Time [msec])	0...1000msec	Sets the time delay from the input signal.
	High Damp[%]	0...100%	Damping amount in the high range

34: Pitch Shifter

This effect changes the pitch of the input signal. You can select from three types: Fast (quick response), Medium, and Slow (preserves tonal quality). You can also create an effect in which the pitch is gradually raised (or dropped) using the delay with feedback.

Wet: Mono In - Mono Out / Dry: Stereo In - Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Mode	Slow, Medium, Fast	Switches Pitch Shifter mode. ☞P.88	
	Delay Time[ms] (Delay Time [msec])	0...1000msec	Sets the delay time from the input signal. ☞P.88	
c	Pitch[1/2tone] (Pitch Shift [1/2tone])	–24...+24	Sets the pitch shift amount by steps of a semitone. ☞P.88	D-mod
	Src	None...Tempo	Modulation source of pitch shift amount	
	Amt	–24...+24	Modulation amount of pitch shift amount	
d	Fine[cent]	–100...+100cent	Sets the pitch shift amount by steps of a cent. ☞P.88	D-mod
	Amt	–100...+100vent	Modulation amount of pitch shift amount	
e	Feedback	–100...+100	Sets the feedback amount. ☞P.88	
	High Damp[%]	0...100%	Damping amount in the high range	
f	Input Level	0...100	Sets the input level to the effect.	D-mod
	Src	None...Tempo	Selects the modulation source of input level.	
	Amt	–100...+100	Modulation amount of input level	

b: Mode

This parameter switches the pitch shifter operating mode. With Slow, tonal quality will not be changed too much. With Fast, the effect becomes a Pitch Shifter that has a quick response, but may change the tone. Medium is in between these two.

If you do not need to set too much pitch shift amount, set this parameter to "Fast." If you wish to change the pitch significantly, use "Slow."

b: Delay Time[ms]
e: Feedback

Sets the delay time and feedback amount. The sound with feedback will be input to the Pitch Shifter again, causing the pitch to be raised (or lowered) gradually.

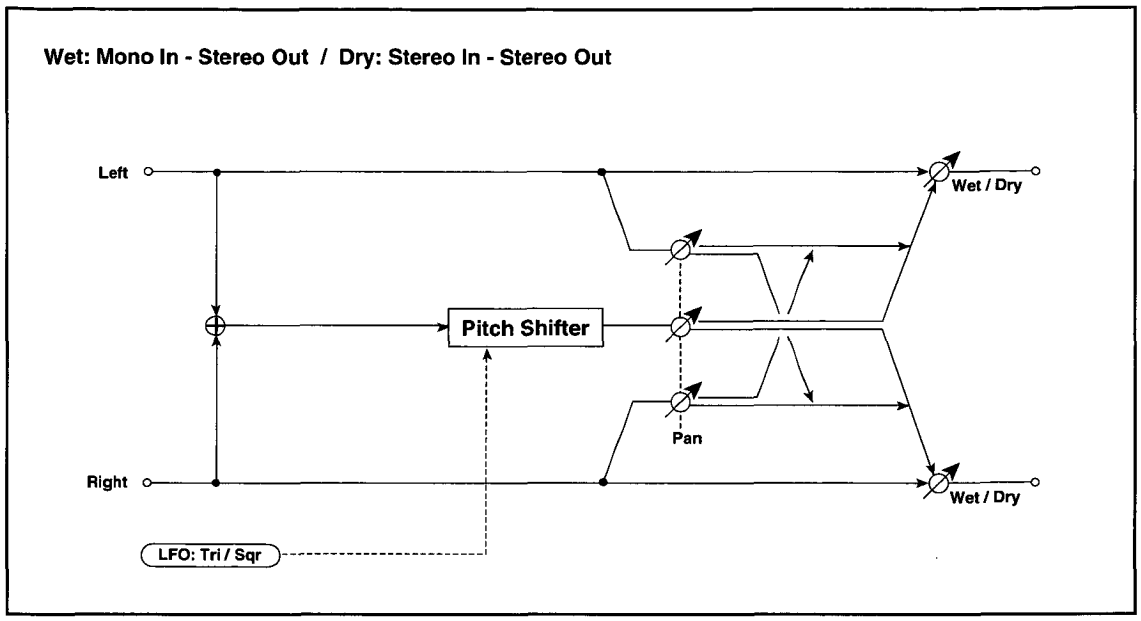
c: Pitch[1/2tone]
c: Src
c: Amt
d: Fine[cent]
d: Amt

The amount of pitch shift will use the value of the Pitch plus the Fine value. The amount of modulation will use the c: Amt value plus d: Amt.

Modulation Source is used both for Pitch and Fine.

35: PitchShft Mod (Pitch Shift Mod.)

This effect modulates the detuned pitch shift amount using an LFO, adding a clear spread and width to the sound by panning the effect sound and dry sound to the left and right. This is especially effective when the effect sound and dry sound output from stereo speakers are mixed.



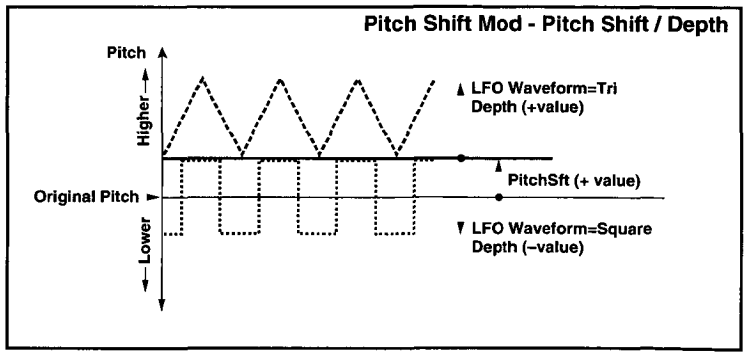
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds. ☞P.89	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	PitchSft[cent] (Pitch Shift [cent])	–100...+100cent	Pitch difference from the input signal ☞P.89	
	LFO Waveform	Tri (Triangle), Square	Selects LFO waveform.	
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
d	Depth	–100...+100	LFO modulation depth for pitch shift amount ☞P.89	D-mod
	Src	None...Tempo	Modulation source of the depth of modulation	
	Amt	–100...+100	Modulation amount of the depth of modulation	
e	Pan	L, 1:99...99:1, R	Pans the effect sound and dry sound separately. ☞P.89	

a: Wet/Dry
e: Pan

The Pan parameter pans the effect sound and dry sound to the left and right. With "L," the effect sound is panned left, and the dry sound is panned right. With a Wet/Dry = Wet setting, the effect and dry sound will be output in a proportion of 1:1.

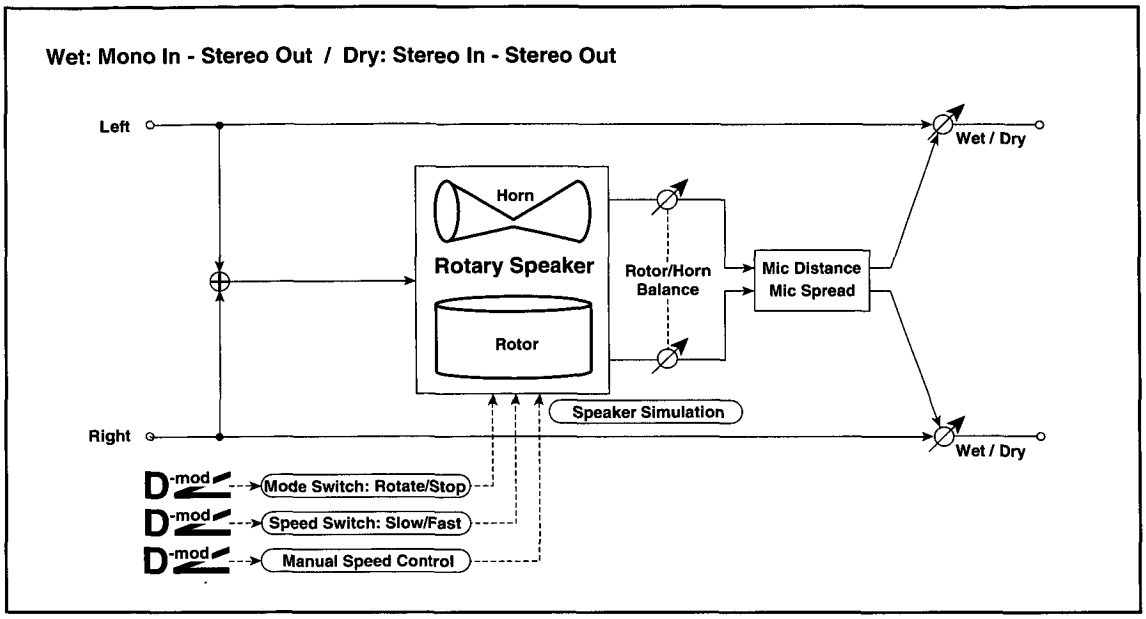
b: PitchSft[cent]
d: Depth

These parameters set the amount of pitch shift and amount of modulation by means of the LFO.



36: RotarySpeaker (Rotary Speaker)

This effect simulates a rotary speaker, and obtains a more realistic sound by simulating the rotor in the low range and the horn in the high range separately. The effect also simulates the microphone settings.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Speed Switch	Slow, Fast	Switches the speaker rotation speed between slow and fast.	D-mod
	Src	None...Tempo	Modulation source that toggles between slow and fast	
	Sw	Moment (Momentary), Toggle	Selects switching mode of the modulation source that toggles between slow and fast. ☞P.40	
c	Mode Switch	Rotate, Stop	Switches between speaker rotation and stop.	D-mod
	Src	None...Tempo	Modulation source that toggles between rotation and stop	
	Sw	Moment (Momentary), Toggle	Selects switching mode of the modulation source that toggles between rotation and stop. ☞P.91	
d	Manu.Spd Src (Manual Speed Control)	None...Tempo	Sets the modulation source in case the rotation speed is changed directly. ☞P.91	D-mod
	Rotor/Horn Bal (Rotor/Horn Balance)	Rotor, 1...99, Horn	Sets the volume level balance between the low-range rotor and high-range horn.	
e	Rotor Accel (Rotor Acceleration)	0...100	How quickly the rotor rotation speed in the low range is switched. ☞P.40	
	Rotor Ratio	Stop, 0.50...2.00	Adjusts the (low-range side) rotor rotation speed. Standard value is 1.00. *Selecting "Stop" will stop the rotation.*	
f	Horn Accel (Horn Acceleration)	0...100	How quickly the horn rotation speed in the high range is switched. ☞P.40	
	Horn Ratio	Stop, 0.50...2.00	Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation.	
g	Mic Distance	0...50	Distance between the microphone and rotary speaker ☞P.91	
	Mic Spread	0...50	Angle of left and right microphones ☞P.91	

c: Sw

This parameter sets how the modulation source switches between rotation and stop.

When Sw = Moment, the speaker is rotating. It stops only when you hold the connected MIDI keyboard's pedal or operate the joystick.

MIDI When the value for the modulation source is 63 or smaller, the speaker will rotate. When the value is 64 or higher, the speaker will stop.

When Sw = Toggle, the speaker rotates or stops alternately each time you press the connected MIDI keyboard's pedal or operate the joystick.

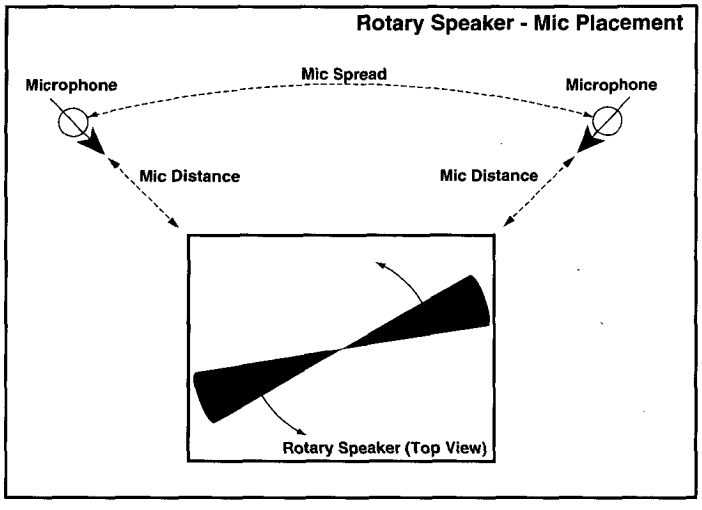
MIDI Each time when the value for the modulation source exceeds 64, the speaker rotates or stops alternately.

d: Manu.Spd Src

If you wish to control the speaker rotation speed manually, not switching between Slow and Fast, select the modulation source in the Manu.Spd Src field. If manual control is not necessary, set this field to "None."

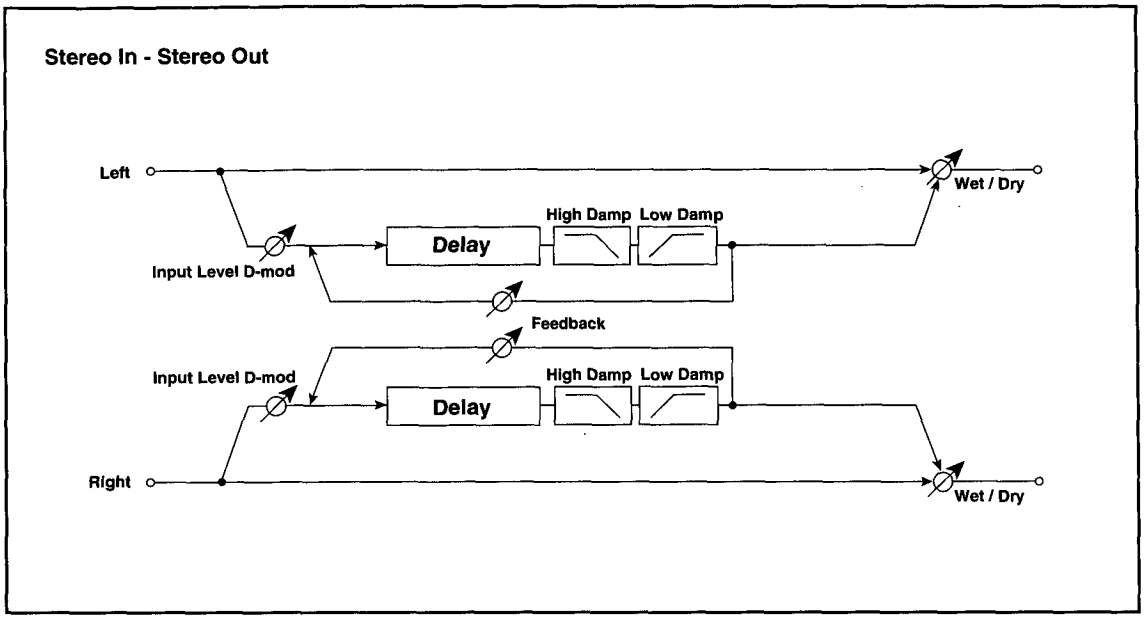
g: Mic Distance
g: Mic Spread

This is a simulation of stereo microphone settings.



37: Dual Delay

This 2-channel delay allows you to set the delay time for the left and right channels independently.

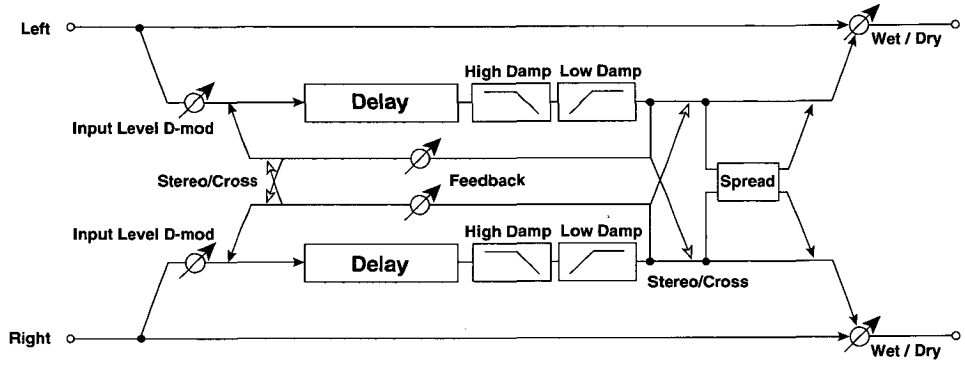


a	L Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds for the left channel.	D-mod
	Src	None...Tempo	Modulation source of left/right effect balance	
	Amt	–100...+100	Modulation amount of effect balance for the left channel	
b	R Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds for the right channel.	D-mod
	Amt	–100...+100	Modulation amount of effect balance for the right channel	
c	L Time[ms] (L Delay Time [msec])	0.0...680.0msec	Sets the delay time for the left channel.	
	R Time[ms] (R Delay Time [msec])	0.0...680.0msec	Sets the delay time for the right channel.	
d	L Feedback	–100...+100	Sets the feedback amount for the left channel.	
	R Feedback	–100...+100	Sets the feedback amount for the right channel.	
e	L High Damp[%]	0...100%	Damping amount in the high range for the left channel ☞P.41	
	R High Damp[%]	0...100%	Damping amount in the high range for the right channel	
f	L Low Damp[%]	0...100%	Damping amount in the low range for the left channel ☞P.41	
	R Low Damp[%]	0...100%	Damping amount in the low range for the right channel	
g	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the left and right input level ☞P.41	D-mod
	AmtL	–100...+100	Modulation amount of the input level for the left channel ☞P.41	
	AmtR	–100...+100	Modulation amount of the input level for the right channel	

38: Stereo Delay

This is a stereo delay, and can by used as a cross-feedback delay effect in which the delay sounds cross over between the left and right by changing the feedback routing.

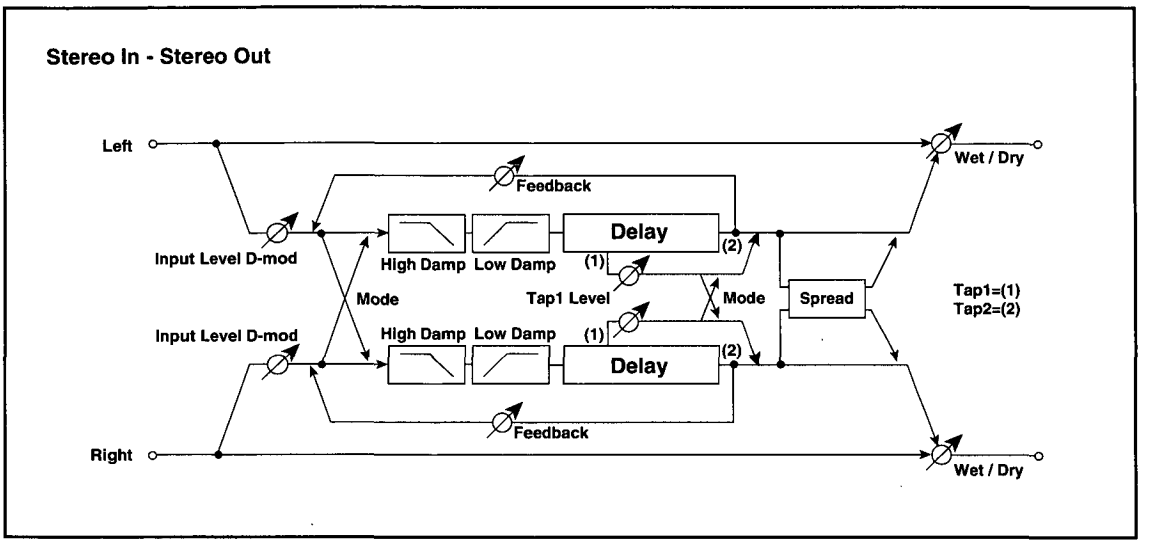
Stereo In - Stereo Out

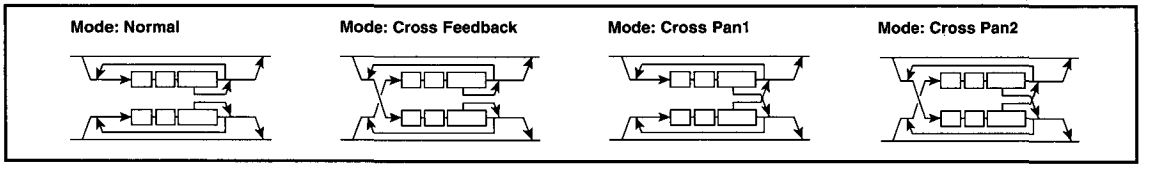


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Stereo/Cross	Stereo, Cross	Switches between stereo delay and cross-feedback delay.	
c	L Time[ms] (L Delay Time [msec])	0.0...680.0msec	Sets the delay time for the left channel.	
	R Time[ms] (R Delay Time [msec])	0.0...680.0msec	Sets the delay time for the right channel.	
d	Feedback	–100...+100	Sets the feedback amount.	D-mod
	Src	None...Tempo	Modulation source of feedback amount	
	Amt	–100...+100	Modulation amount of feedback amount	
e	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
f	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	–100...+100	Modulation amount of the input level	
g	Spread	–100...+100	Sets the width of the stereo image of the effect sound. ☞P.60	D-mod
	Src	None...Tempo	Modulation source of the effect sound's stereo image width	
	Amt	–100...+100	Modulation amount of the effect sound's stereo image width	

39: St.MltTap Dly (St. Multitap Delay)

The left and right Multitap Delays have two taps respectively. Changing the routing of feedback and tap output allows you to create various patterns of complex effect sounds.





a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	-100...+100	Modulation amount of effect balance	
b	Tap1 Time[ms] (Tap1 Time [msec])	0.0...680.0msec	Sets the Tap1 delay time.	
	Tap2 Time[ms] (Tap2 Time [msec])	0.0...680.0msec	Sets the Tap2 delay time.	
c	Mode	Normal, Cross Feedback, Cross Pan1, Cross Pan2	Switches the left and right delay routing. ☞P.94	
	Tap1 Level	0...100	Tap1 output level ☞P.42	
d	Feedback	-100...+100	Sets the Tap2 feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the Tap2 feedback amount	
	Amt	-100...+100	Modulation amount of the Tap2 feedback amount	
e	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
f	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	-100...+100	Modulation amount of the input level	
g	Spread	-100...+100	Sets the width of the stereo image of the effect sound. ☞P.60	D-mod
	Src	None...Tempo	Modulation source of the effect sound's stereo image width	
	Amt	-100...+100	Modulation amount of the effect sound's stereo image width	

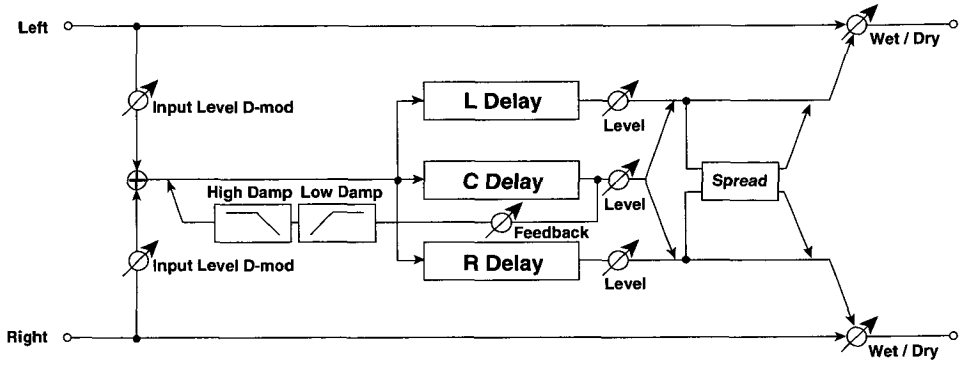
c: Mode

You can change how the left and right delay signals are panned by modifying the routing of the left and right delay as shown in the figure above. You need to input different sounds to each channel in order for this parameter to be effective.

40: LCR Delay (L/C/R Delay)

This multitap delay outputs three Tap signals to the left, right, and center respectively. You can also adjust the left and right spread of the delay sound.

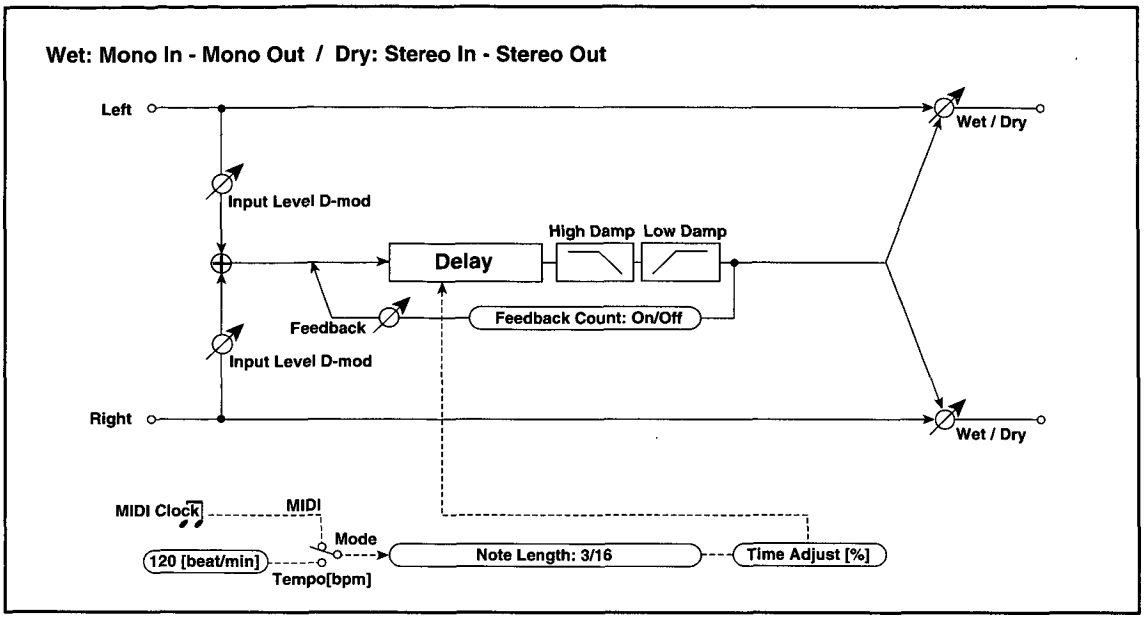
Wet: Mono In - Stereo Out / Dry: Stereo In -Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	L Time[ms] (L Delay Time [msec])	0...1360msec	Sets the TapL delay time.	
	L Level (Level)	0...50	TapL output level	
c	C Time[ms] (C Delay Time [msec])	0...1360msec	Sets the TapC delay time.	
	C Level (Level)	0...50	TapC output level	
d	R Time[ms] (R Delay Time [msec])	0...1360msec	Sets the TapR delay time.	
	R Level (Level)	0...50	TapR output level	
e	Feedback	−100...+100	Sets the TapC feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the TapC feedback amount	
	Amt	−100...+100	Modulation amount of the TapC feedback amount	
f	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
g	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	−100...+100	Modulation amount of the input level	
h	Spread	0...50	Sets the width of the stereo image of the effect sound. ☞P.60	

41: Tempo Delay

This delay allows you to match the delay time with a song's tempo. For example, you can apply the delay effect synchronized to the sequencer, or you can input the tempo prior to a real-time performance so that the delay effect will match the song tempo. You can set the delay time in terms of a musical duration, rather than as a value of time. You can also specify any number of times for feedback.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.96	
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when Mode = Tempo[bpm] ☞P.96	
c	Note Length (Length)	1...96 / 1...96	Sets the delay time. Delay time = Note Length x Whole Note. ☞P.97	
d	Time Adj.[%] (Time Adjust [%])	−10.00...+10.00%	Fine adjustment of delay time	
	Delay 1362ms	OVER!!	Delay time upper limit/error indication ☞P.97	
e	Feedback	−100...+100	Sets the feedback amount.	D-mod
	Src	None...Tempo	Modulation source of feedback amount	
	Amt	−100...+100	Modulation amount of feedback amount	
f	Feedback Count	Off, On	Selects whether the number of feedback times is counted or not. ☞P.97	
	Count[times]	0...96	Number of feedback times ☞P.97	
g	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
h	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	−100...+100	Modulation amount of the input level	

b: Mode

This parameter selects the delay operating mode. When Tempo is selected, the value set in Tempo[bpm] will be used. When MIDI is selected, the delay will synchronize to the MIDI clock of the connected MIDI device. This is useful for performances using a sequencer.

b: Tempo[bpm]

This parameter sets the tempo when Temp[bpm] is selected for Mode.

c: Note Length
d: Delay 1362ms

This parameter sets the delay time. The delay time is obtained by multiplying the length of a whole note by the value of Note Length.

For example, when Note Length is set to 1/4, the length of the delay will be one quarter note.

The maximum delay time is 1,362msec. If you attempt to set a higher value, the display for the d: Delay 1362ms: parameter will show "OVER!!" Try to set the value of Tempo and Note Length so that this error message will not appear.

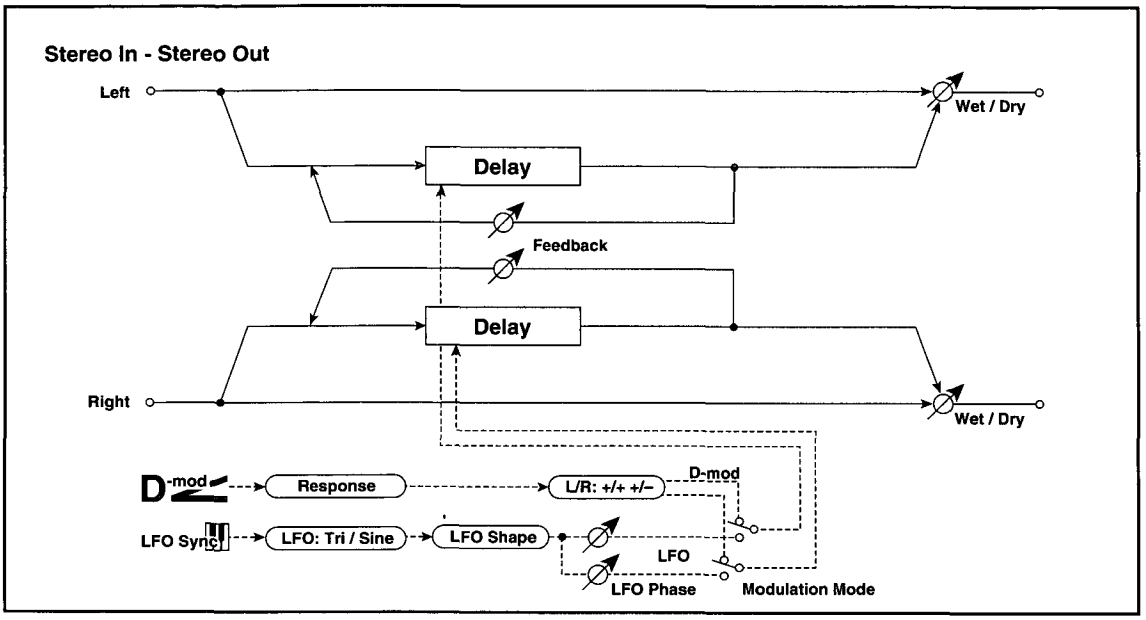
f: Feedback Count
f: Count[times]

The Feedback Count parameter determines whether or not the number of feedback times will be counted or not.

With Feedback Count = On, the delay will feed back the signal for the times specified in the Count parameter, and disappear.

42: St.Mod.Delay (St. Modulation Delay)

This stereo delay uses an LFO to sweep the delay time. The pitch also varies. You will obtain a delay sound with swell and shimmering. You can also control the delay time using a modulation source.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	L Time[ms] (L Delay Time [msec])	0.0...500.0	Left delay time	
	R Time[ms] (R Delay Time [msec])	0.0...500.0	Right delay time	
c	L Depth	0...200	Depth of the left LFO modulation	
	R Depth	0...200	Depth of the right LFO modulation	
d	L Feedback	–100...+100	Feedback amount of left delay	
	R Feedback	–100...+100	Feedback amount of right delay	
e	Mod. Mode (Modulation Mode)	LFO, D-mod	Switches between LFO modulation control and modulation source control.	
	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	
f	LFO Sync	Off, On	LFO reset off/on ☞P.99	
	Src	None...Tempo	Modulation source that resets the LFO	D-mod
g	LFO Waveform	Tri (Triangle), Sine	Selects LFO waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is modified. ☞P.30	
h	L LFOphas[deg] (L LFO Phase [degree])	–180...+180	Phase obtained when the left LFO is reset ☞P.99	
	R LFOphas[deg] (R LFO Phase [degree])	–180...+180	Phase obtained when the right LFO is reset	
i	D-mod (D-mod Modulation)	L/R:+/+, L/R:+/–	Reversed L/R control by modulation source ☞P.99	D-mod
	Src	None...Tempo	Modulation source that controls delay time	
	Respon (Response)	0...30	Rate of response to the modulation source	

f: LFO Sync
f: Src
h: L LFOphas[deg]
h: R LFOphas[deg]

The LFO can be reset via a modulation source.

The Src parameter sets the modulation source that resets the LFO. For example, you can assign Gate as a modulation source so that the sweep always starts from the specified point.

L LFOphas and R LFOphas set the phase obtained when the left and right LFOs are reset. In this way, you can create changes in sweep pitch for the left and right channels individually.

MIDI The effect is off when a value of the modulation source specified in the Src parameter is 63 or smaller, and the effect is on when the value is 64 or higher. The LFO is triggered and reset to the L LFOphas and R LFOphas settings when the value changes from 63 or smaller to 64 or higher.

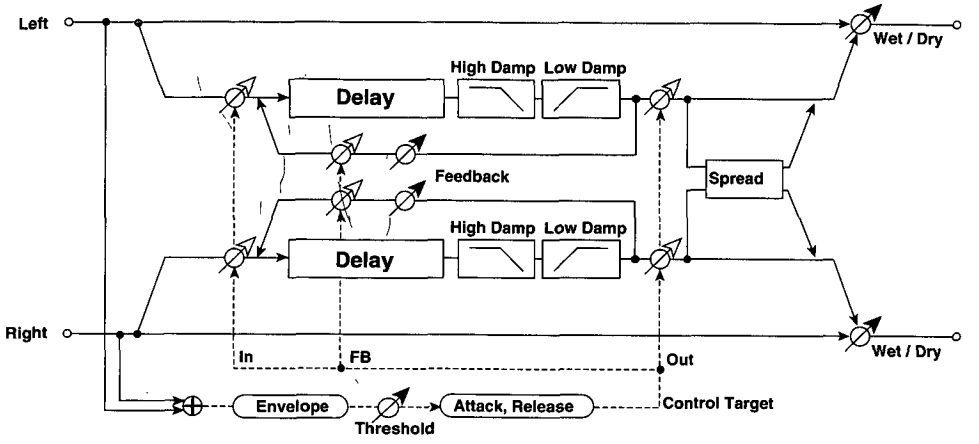
i: D-mod

When the modulation source is used for control, this parameter reverses the left and right modulation direction.

43: St.Dyna Delay (St. Dynamic Delay)

This stereo delay controls the level of delay according to the input signal level. You can use this as a ducking delay that applies delay to the sound only when you play keys at a high velocity or only when the volume level is low.

Stereo In - Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	L Time[ms] (L Delay Time [msec])	0.0...680.0msec	Sets the delay time for the left channel.	
	R Time[ms] (R Delay Time [msec])	0.0...680.0msec	Sets the delay time for the right channel.	
c	Control Target	None, In, Out, FB	Selects from no control, input, output, and feedback.	☞P.100
	Polarity	+, –	Reverses level control	☞P.100
d	Threshold	0...100	Sets the level to which the effect is applied.	☞P.100
e	Attack	1...100	Attack time of level control	☞P.100
	Release	1...100	Release time of level control	☞P.100
f	Feedback	–100...+100	Sets the feedback amount.	
	Spread	–100...+100	Sets the width of the stereo image of the effect sound.	☞P.60
g	High Damp[%]	0...100%	Damping amount in the high range	☞P.41
	Low Damp[%]	0...100%	Damping amount in the low range	

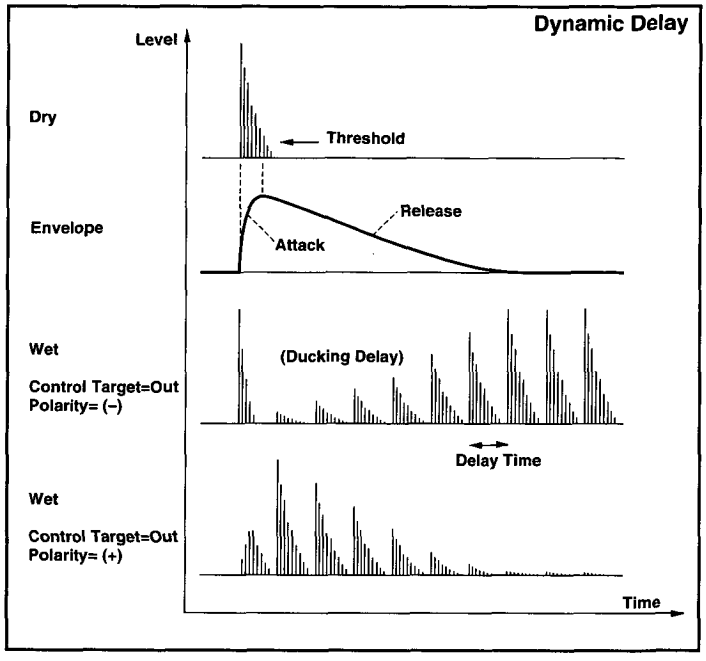
c: Control Target

In this field, you can select from no level control, control of delay input level, output (effect balance), and feedback amount.

c: Polarity
d: Threshold
e: Attack
e: Release

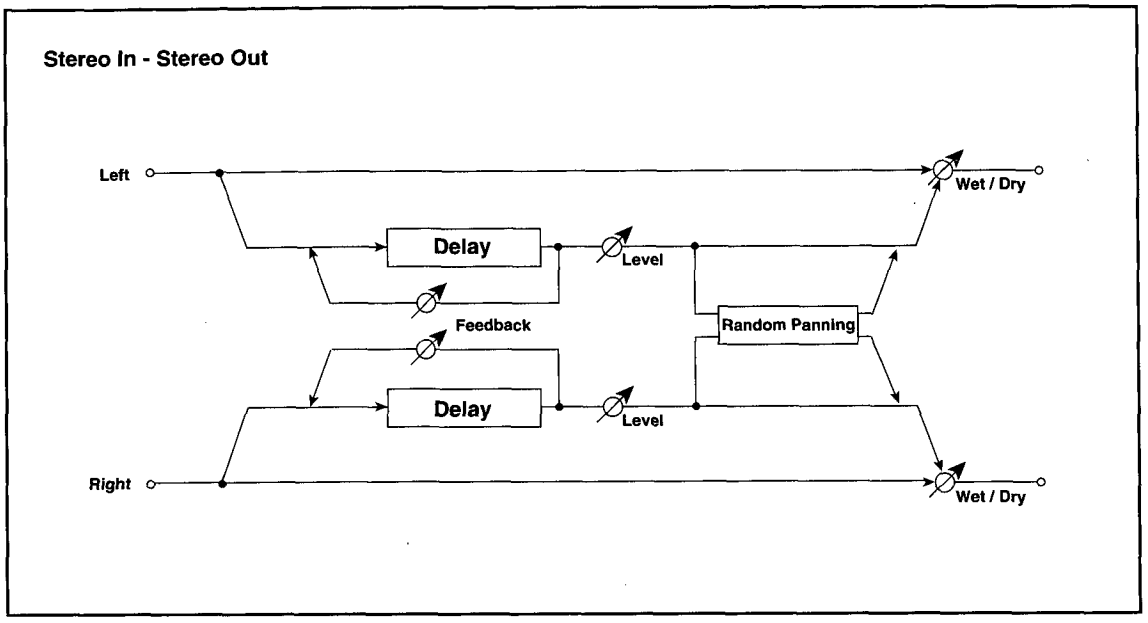
When Polarity is positive, delay is applied when the input signal level exceeds the Threshold value. When Polarity is negative, delay is applied when the input signal level is lower than the Threshold value.

The Attack and Release parameters specify attack time and release time of delay level control.


Dynamic Delay
Level
Dry
Threshold
Envelope
Release
Attack
Wet
Control Target=Out
Polarity= (–)
(Ducking Delay)
Delay Time
Wet
Control Target=Out
Polarity= (+)
Time

44: RndmPan Delay (Random Panning Dly)

When this stereo delay is applied, the delay sound will jump around randomly, creating a unique, mysterious delay effect.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	L Time[ms] (L Delay Time [msec])	0.0...680.0msec	Sets the delay time for the left channel.	
	R Time[ms] (R Delay Time [msec])	0.0...680.0msec	Sets the delay time for the right channel.	
c	L Feedback	−100...+100	Sets the feedback amount for the left channel.	
	R Feedback	−100...+100	Sets the feedback amount for the right channel.	
d	L Pan Spd[Hz] (L Panning Speed [Hz])	0.02...20.00Hz	Speed at which the stereo image of the left channel changes ☞P.102	
	R Pan Spd[Hz] (R Panning Speed [Hz])	0.02...20.00Hz	Speed at which the stereo image of the right channel changes ☞P.102	
e	L Delay Level	0...100	Output level of the left channel delay sound	
	R Delay Level	0...100	Output level of the right channel delay sound	
f	Panning Spread	0...100	Sets the width of the stereo image of the delay sound. ☞P.102	

d: L Pan Spd[Hz]
d: R Pan Spd[Hz]

These parameters set the speed at which the stereo image of the delay sound changes randomly. It is effective to set these values according to the delay time.

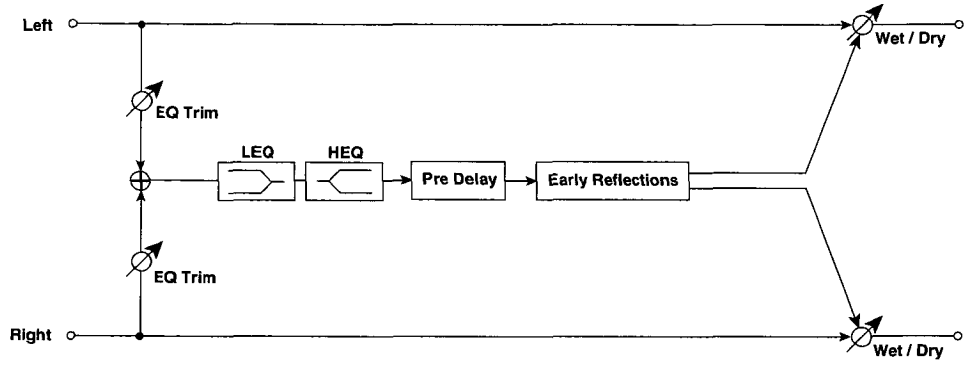
f: Panning Spread

This parameter sets the panning width of the delay sound.

45: Early Reflect (Early Reflections)

This is a stereo early reflection effect. Compared to the Early Reflections of size 1, this effect has twice the number of reflections, thus creating a smooth and dense sound.

Wet: Mono In - Stereo Out / Dry: Stereo In - Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	-100...+100	Modulation amount of effect balance
b	Type	Sharp, Loose, Modulated, Reverse	Selects the decay curve for the early reflection. ☞P.43
	ER Time[ms] (ER Time [msec])	10...800msec	Time length of early reflection
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Time taken from the original sound to the first early reflection
	EQ Trim	0...100	Input level of EQ applied to the effect sound
d	LEQ Gain[dB] (Pre LEQ Gain [dB])	-15.0...+15.0dB	Low range EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	-15.0...+15.0dB	High range EQ gain

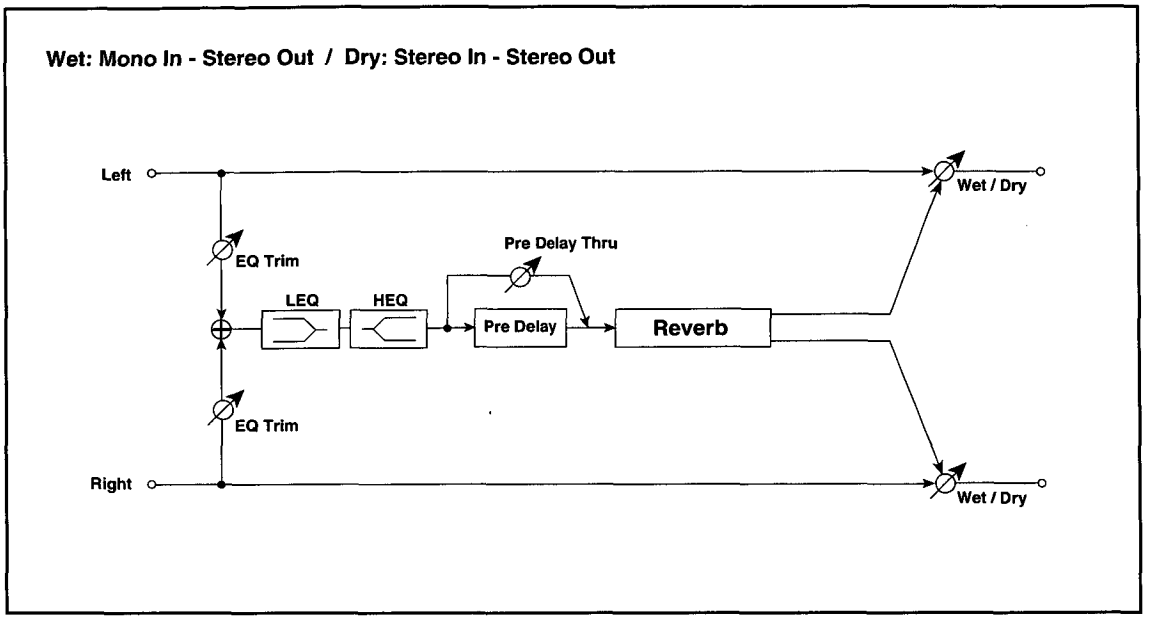
D-mod

46: Rev-Hall (Reverb-Hall)

This effect simulates the reverberation and ambience of medium-size concert halls and ensemble halls.

47: Rev-SmothHall (Reverb-SmoothHall)

This hall-type reverb creates a reverberation with a smooth release curve. Setting a longer reverb time can simulate reverberations from that of a larger hall to that of a stadium.

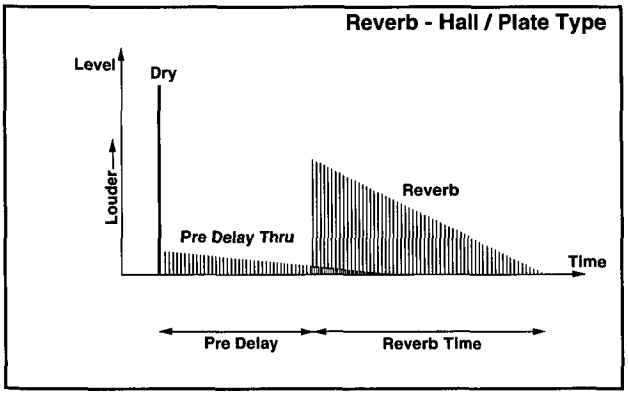


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Reverb Time[s] (Reverb Time [sec])	0.1...10.0sec	Sets the reverberation time.	
	High Damp[%]	0...100%	Damping amount in the high range	
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Delay time from the dry sound	☞P.104
	PreDly Thru[%] (Pre Delay Thru [%])	0...100%	Mix ratio of non-delay sound	☞P.104
d	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15...+15dB	Low-EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15...+15dB	High-EQ gain	
e	EQ Trim	0...100	EQ input level	

c: Pre Delay[ms]
c: PreDly Thru[%]

The Pre Delay sets the delay time to the reverb input, allowing you to control spaciousness.

Using the PreDly Thru parameter, you can mix the dry sound without delay, emphasizing the attack of the sound.



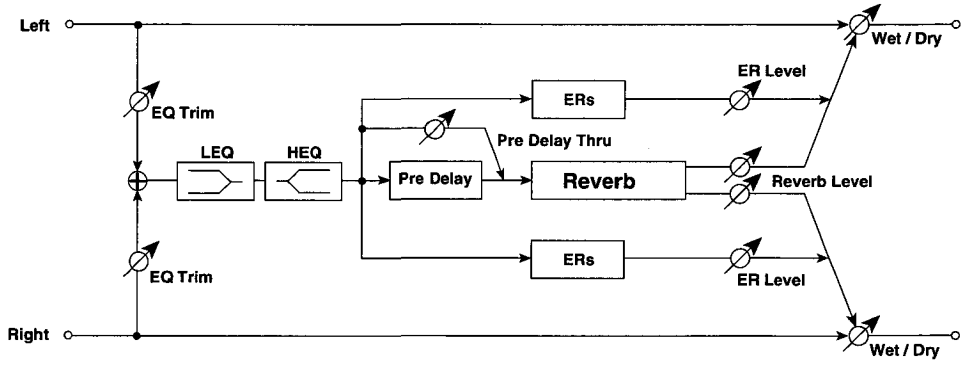
48: Rev-Room (Reverb-Room)

This reverberation effect emphasizes the early reflections, simulating a tight, room sound. Changing the balance between the early reflections and reverb sound allows you to simulate nuances, such as the type of walls of a room.

49: Reverb-BrghtRoom (Reverb-BrightRoom)

This reverberation creates a bright, room-type sound.

Wet: Mono In - Stereo Out / Dry: Stereo In - Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	−100...+100	Modulation amount of effect balance
b	Reverb Time[s] (Reverb Time [sec])	0.1...3.0sec	Sets the reverberation time.
	High Damp[%]	0...100%	Damping amount in the high range
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Delay time from the dry sound ☞P.105
	PreDly Thru[%] (Pre Delay Thru [%])	0...100%	Mix ratio of non-delay sound ☞P.105
d	ER Level	0...100	Sets the level of early reflections. ☞P.105
	Reverb Level	0...100	Sets the reverberation level. ☞P.105
e	LEQ Gain[dB] (Pre LEQ Gain [dB])	−15...+15dB	Low-EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	−15...+15dB	High-EQ gain
f	EQ Trim	0...100	EQ input level

c: Pre Delay[ms]
c: PreDly Thru[%]

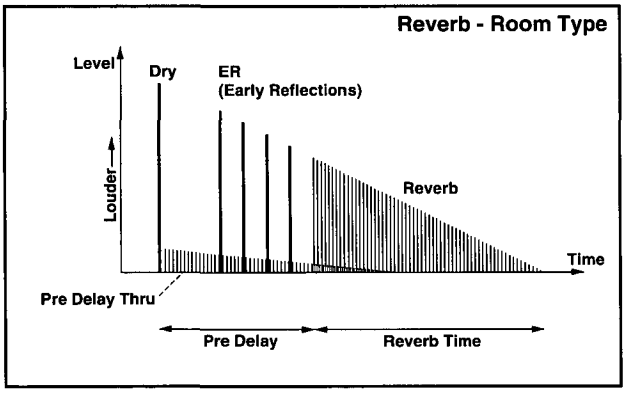
The Pre Delay sets delay time of reverb input, allowing you to control spaciousness.

Using the PreDly Thru parameter, you can mix the dry sound without delay, emphasizing the attack of the sound.

d: ER Level
d: Reverb Level

These parameters set the early reflection level and reverb level.

Changing these parameter values allows you to simulate the type of walls in the room. That is, a larger ER Level simulates a hard wall, and a larger Reverb Level simulates a soft wall.

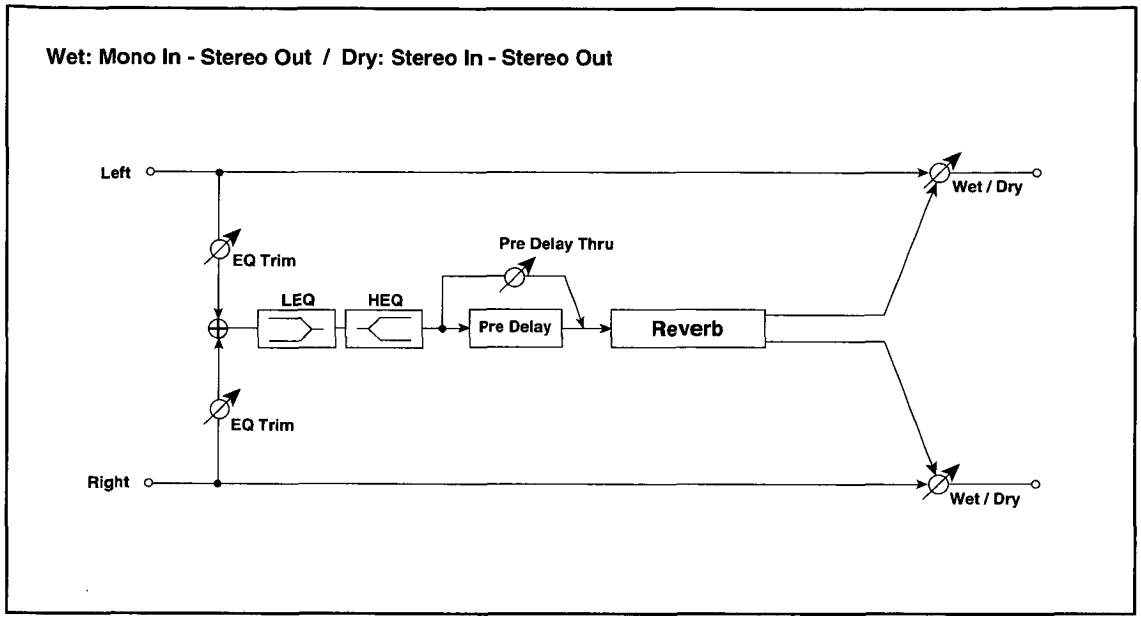


50: Rev-Wet Plate (Reverb-Wet Plate)

This effect simulates a dense plate reverberation. You can create a warm reverb sound.

51: Rev-Dry Plate (Reverb-Dry Plate)

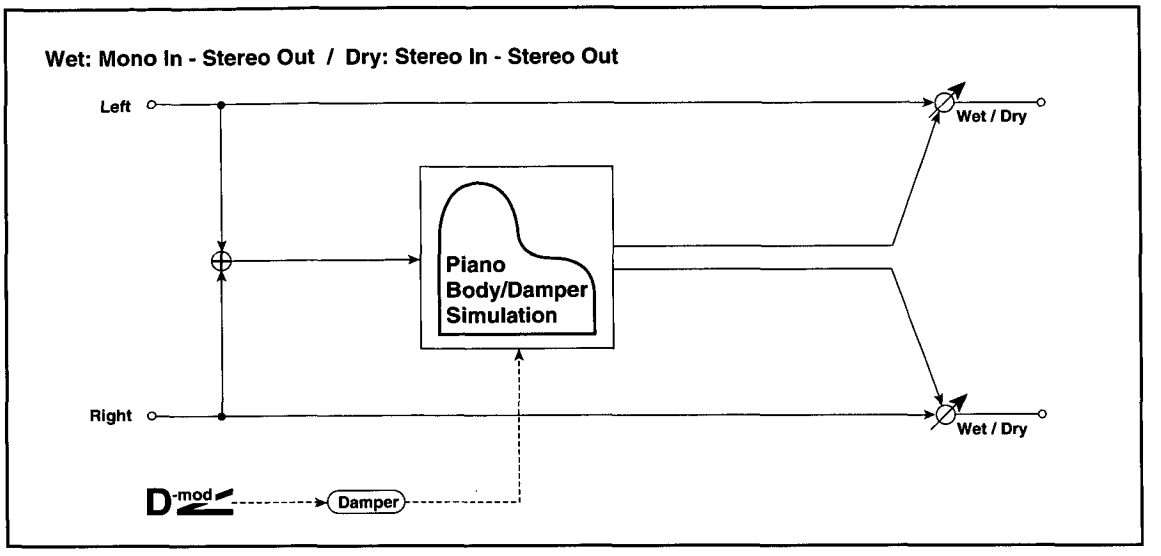
This effect simulates a lighter plate reverberation. You can create a dry reverb sound.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	−100...+100	Modulation amount of effect balance
b	Reverb Time[ms] (Reverb Time [sec])	0.1...10.0sec	Sets the reverberation time.
	High Damp[%]	0...100%	Damping amount in the high range
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Delay time from the dry sound ☞P.104
	PreDly Thru[%] (Pre Delay Thru [%])	0...100%	Mix ratio of non-delay sound ☞P.104
d	LEQ Gain[dB] (Pre LEQ Gain [dB])	−15...+15dB	Low-EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	−15...+15dB	High-EQ gain
e	EQ Trim	0...100	EQ input level

00: Piano Body (Piano Body/Damper)

This effect simulates the resonance of the piano sound board caused by the string vibration, and also simulates the resonance of other strings that are not being played when you press the damper pedal. It will create a very realistic sound when applied to acoustic piano sounds.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	SoundBoard Dep (Sound Board Depth)	0...100	Sets the intensity of resonance of the sound board. ☞P.108	
c	Damper Depth	0...100	Sets the intensity of the string resonance created when the damper pedal is pressed. ☞P.108	D-mod
	Src	None...Tempo	Modulation source of damper effect	
d	Tone	1...100	Adjusts tonal quality of effect sound. ☞P.108	
	Mid Shape	0...36	Adjusts the mid range of tonal quality. ☞P.108	
e	Tune	–50...+50	Fine tuning ☞P.108	

b: SoundBoard Dep

This parameter sets the intensity of resonance of the piano sound board.

c: Damper Depth
c: Src

This parameter sets the resonance intensity of the other strings created when the damper pedal of the connected MIDI keyboard is pressed. The Src parameter selects the modulation source from which the damper effect is applied. Usually, select SusPdl (Sustain pedal).

MIDI The effect is off when a value for the modulation source specified for the Src parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

d: Tone
d: Mid Shape

These parameters control the tonal quality of the effect sound.

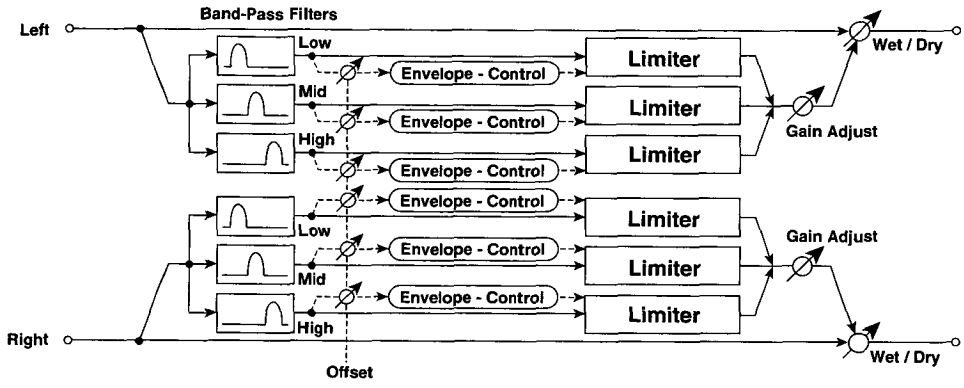
e: Tune

Since this effect simulates the resonance of the strings, the sound varies depending on the pitch. If you have changed tuning using the Master Tune, adjust this parameter value.

01: St.MltBandLmt (St. Mlt.band Limiter)

This is a stereo multiband limiter.

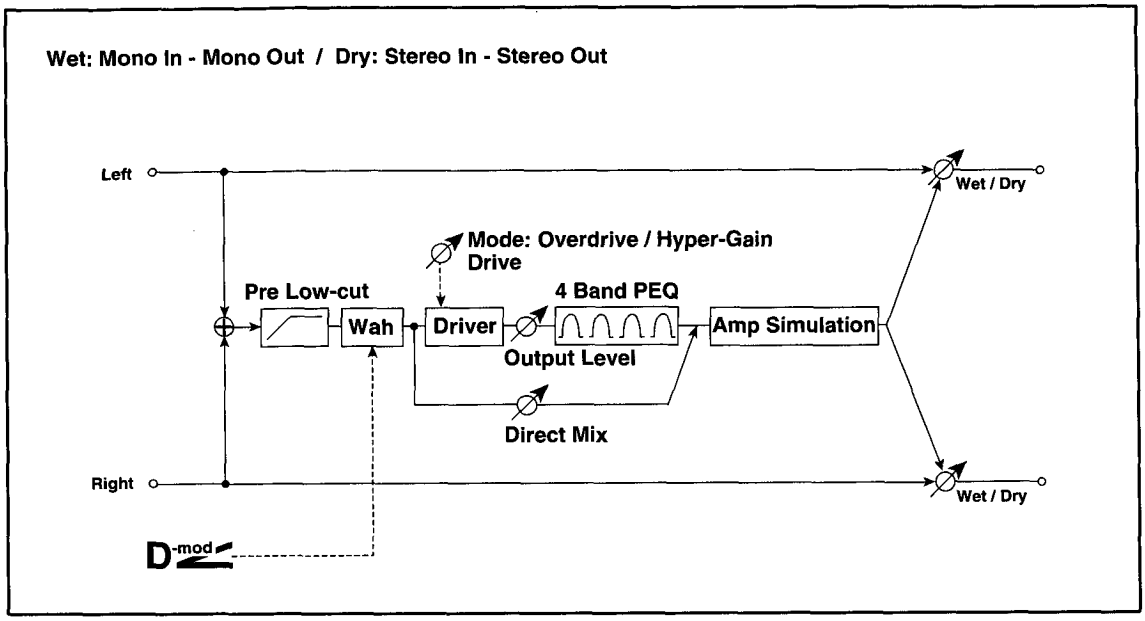
Stereo In - Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Ratio	1.0:1...50.0:1, Inf:1	Sets the signal compression ratio. ☞P.15
	Threshold[dB]	–40...0dB	Sets the signal level above which compression is applied. ☞P.15
c	Attack	1...100	Sets the attack time. ☞P.16
	Release	1...100	Sets the release time. ☞P.16
d	Low Offset[dB]	–40...0dB	Low range gain of trigger signal ☞P.47
	Mid Offset[dB]	–40...0dB	Mid range gain of trigger signal ☞P.47
e	High Offset[dB]	–40...0dB	High range gain of trigger signal ☞P.47
	Gain Adjust[dB]	–16...+24dB	Sets the output gain. ☞P.15

02: OD/HyperG Wah (OD/Hyper-Gain Wah)

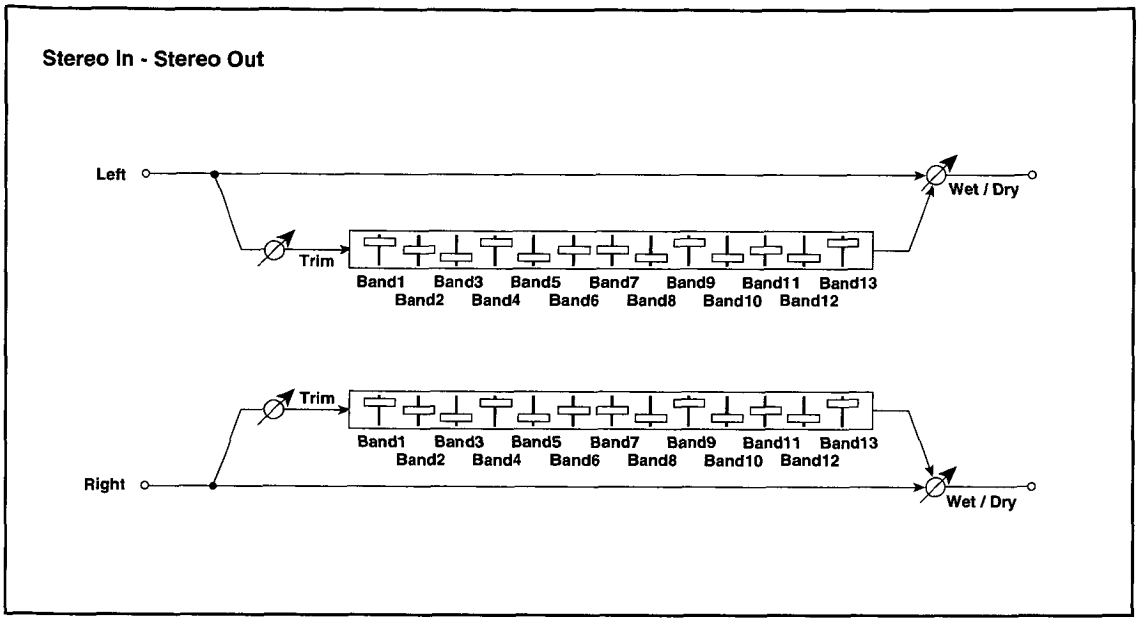
This distortion effect has two modes: overdrive and hyper-gain that produces a strong distortion. The effect also has wah, 4-band EQ, and amp simulator. Compared to the same effect of size 1 and 2, you can set a higher gain for this effect.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Wah	Off, On	Switches Wah on/off. ☞P.50	D-mod
	Src	None...Tempo	Modulation source that controls wah	
	Sweep Range (Wah Sweep Range)	−10...+10	Sets the sweep range of wah. ☞P.50	
c	Mode (Drive Mode)	Overdrive, Hyper-Gain	Switches between overdrive and hyper-gain distortion.	
	Drive	1...120	Sets the degree of distortion. ☞P.18	
d	Output Level	0...50	Sets the output level.	
	Pre Low-cut	0...10	Low range cut amount at the distortion input ☞P.18	
e	Band1 Fc[Hz] (Band1 Cutoff [Hz])	20...1.0kHz	EQ - Band1 center frequency	
	Gain[dB]	−18...+18dB	Band1 gain	
	Q	0.5...10.0	Band1 bandwidth ☞P.18	
f	Band2 Fc[Hz] (Band2 Cutoff [Hz])	50...5.00kHz	Band2 center frequency	
	Gain[dB]	−18...+18dB	Band2 gain	
	Q	0.5...10.0	Band2 bandwidth ☞P.18	
g	Band3 Fc[Hz] (Band3 Cutoff [Hz])	300...10.00kHz	Band3 center frequency	
	Gain[dB]	−18...+18dB	Band3 gain	
	Q	0.5...10.0	Band3 bandwidth ☞P.18	
h	Band4 Fc[Hz] (Band4 Cutoff [Hz])	500...20.00kHz	Band4 center frequency	
	Gain[dB]	−18...+18dB	Band4 gain	
	Q	0.5...10.0	Band4 bandwidth ☞P.18	
i	Direct Mix	0...50	Mixing amount of dry sound to the distortion	
	Speaker Sim (Speaker Simulation)	Off, On	Speaker simulation on/off	

03: St.Graph.13EQ (St. Graphic 13EQ)

This is a stereo 13-band graphic equalizer that allows for finer equalization. You can select one of two settings for the center frequency for each band.

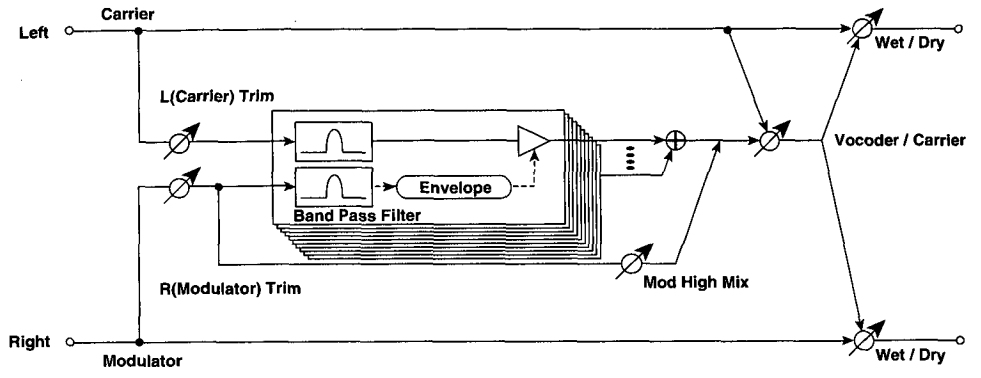


a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	−100...+100	Modulation amount of effect balance
b	Type	A, B	Selects a combination of center frequencies for each band. ☞P.53
	Trim	0...100	Sets the input level.
c	B1[dB] (Band1 [dB])	−18.0...+18.0dB	Sets the Band1 gain.
	B2[dB] (Band2 [dB])	−18.0...+18.0dB	Sets the Band2 gain.
d	B3[dB] (Band3 [dB])	−18.0...+18.0dB	Sets the Band3 gain.
	B4[dB] (Band4 [dB])	−18.0...+18.0dB	Sets the Band4 gain.
e	B5[dB] (Band5 [dB])	−18.0...+18.0dB	Sets the Band5 gain.
	B6[dB] (Band6 [dB])	−18.0...+18.0dB	Sets the Band6 gain.
f	B7[dB] (Band7 [dB])	−18.0...+18.0dB	Sets the Band7 gain.
	B8[dB] (Band8 [dB])	−18.0...+18.0dB	Sets the Band8 gain.
g	B9[dB] (Band9 [dB])	−18.0...+18.0dB	Sets the Band9 gain.
	B10[dB] (Band10 [dB])	−18.0...+18.0dB	Sets the Band10 gain.
h	B11[dB] (Band11 [dB])	−18.0...+18.0dB	Sets the Band11 gain.
	B12[dB] (Band12 [dB])	−18.0...+18.0dB	Sets the Band12 gain.
i	B13[dB] (Band13 [dB])	−18.0...+18.0dB	Sets the Band13 gain.

04: Vocoder

This effect adds characteristics of other signals (Modulator) to the input signal (Carrier). The Carrier is input to the left channel, and the Modulator is input to the right channel. A sound with a lot of harmonics is suitable for a carrier, while a unique effect sound is suitable for a modulator.

Wet: Stereo In - Mono Out / Dry: Stereo In - Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds. ☞P.112	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	L(Carrier) Trim (Lch (Carrier) Trim)	0...100	Input level of left channel (Carrier)	
	R(Modulator)Trim (Rch (Modulator) Trim)	0...100	Input level of right channel (Modulator)	
c	Vocoder/Carrier	0...100	Balance between vocoder output and left channel (Carrier) ☞P.112	D-mod
	Src	None...Tempo	Modulation source of the balance between vocoder output and left channel (Carrier)	
	Amt	−100...+100	Modulation amount of the balance between vocoder output and left channel (Carrier)	
d	Mod High Mix	0...100	Output level of high-range component of right channel (Modulator) ☞P.112	

a: Wet/Dry
c: Vocoder/Carrier

The Vocoder/Carrier parameter sets the balance between the vocoder sound and the left channel sound (Carrier). The Wet/Dry parameter sets the balance between the effect and dry sound.

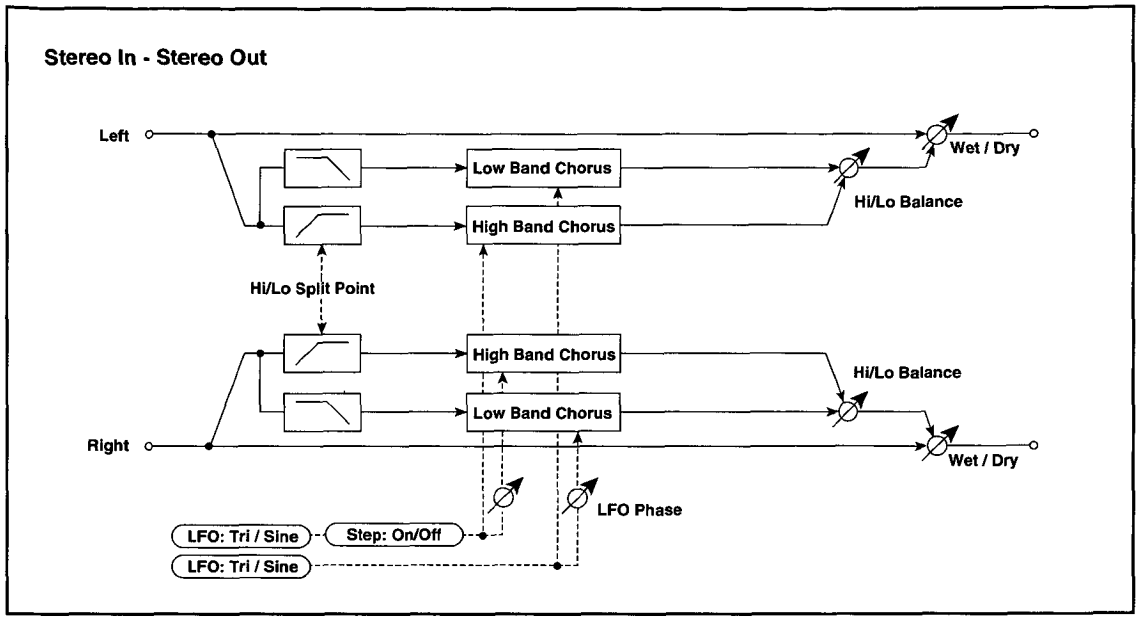
If you wish to change the intensity of the vocoder effect, select "Wet" for Wet/Dry, and adjust the balance using the Vocoder/Carrier parameter.

d: Mod High Mix

This parameter sets the high-range output level of the right channel sound (Modulator). Raise this value to enhance the characteristics of the modulator.

05: St.HarmnicCho (St. Harmonic Chorus)

This is a stereo harmonic chorus effect that applies chorus separately to the high and low ranges of the input signal. You can set the parameters for the low and high range chorus individually. You can also use the high-range chorus as a step chorus employing a step-shape LFO waveform. Thick, fine chorus effects can be created when it is applied to strings or ensemble sounds.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Hi/LoSplitPoint (High/Low Split Point)	1...100	Splits frequencies into high and low ranges ☞P.114	
	Hi/Lo Balance (High/Low Balance)	Low, 1...99, High	Sets output balance between high and low ranges.	
c	Hi Pre Dly[ms] (High)	0.0...50.0msec	High range delay time	
	Lo Pre Dly[ms] (Pre Delay [msec]: Low)	0.0...50.0msec	Low range delay time	
d	High LFO[Hz] (High)	0.02...20.00Hz	High-range LFO speed	
	Low LFO[Hz] (LFO Frequency [Hz]: Low)	0.02...20.00Hz	Low-range LFO speed	
e	High LFO Step (LFO Step Freq [Hz])	Off, On	Determines whether or not the high-range LFO is step-shaped. ☞P.114	
	Step Freq[Hz] (High)	0.05...50.00Hz	Speed at which the LFO waveform becomes step-shaped	
f	LFO Freq D-mod	Low, High, Both	Selects only low-range, high-range, or both ranges for LFO speed modulation. ☞P.114	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	A (Amt)	–20.00 (–80.00) ...+20.00Hz (+80.00)	Modulation amount of LFO speed	
g	High Depth (High)	0...100	Depth of high range LFO modulation	
	Low Depth (Depth: Low)	0...100	Depth of low range LFO modulation	
h	Depth D-mod	Low, High, Both	Selects only low-range, high-range, or both ranges for LFO modulation depth. ☞P.114	D-mod
	Src	None...Tempo	Modulation source of LFO modulation depth	
	Amt	–100...+100	Modulation amount of LFO modulation depth	
i	LFO Waveform	Tri (Triangle), Sine	Selects LFO waveform.	
j	HiLFOphas[deg] (High)	–180...+180	The difference between high-range left and right LFO phase. ☞P.60	
	LoLFOphas[deg] (LFO Phase [degree]: Low)	–180...+180	The difference between low-range left and right LFO phase.	

b: Hi/LoSplitPoint

This parameter sets the split point (frequency) between high and low ranges. Split signals are input to the respective chorus block.

e: High LFO Step
e: Step Freq[Hz]

This parameter determines whether or not the waveform of the high-range LFO should be step-shaped. Changing the e: Step Freq value will allow you to adjust the width of the steps.

f: LFO Freq D-mod

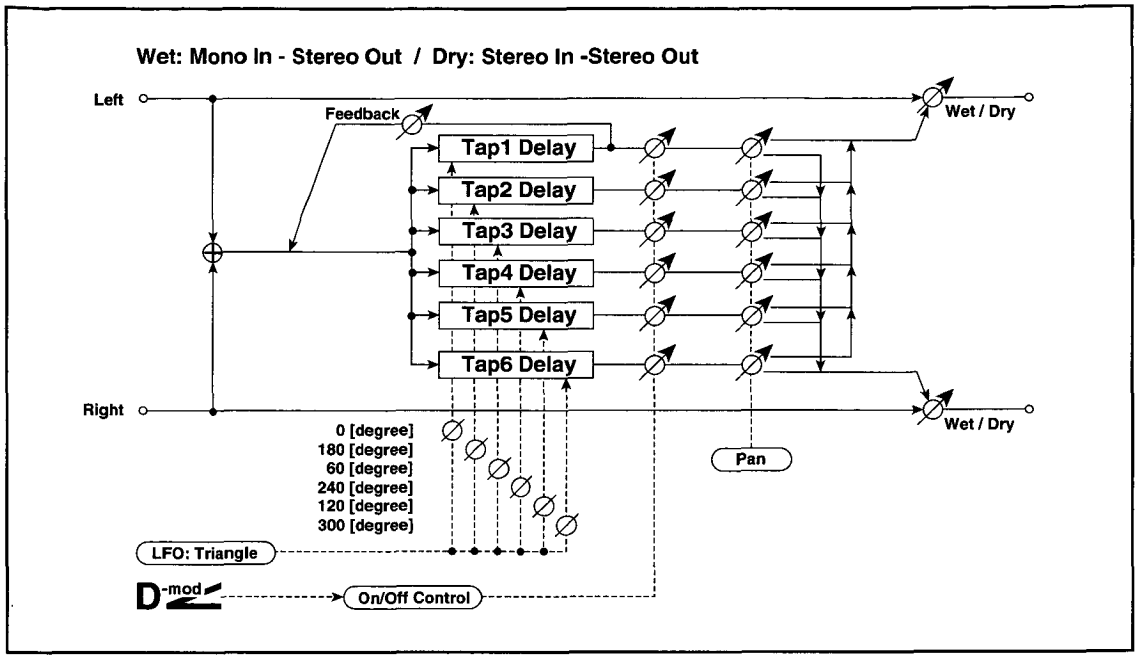
This parameter determines whether the LFO speed dynamic modulation is applied to the low range, high range, or both ranges. When e: High LFO Step is On, the waveform of the high-range LFO will be step-shaped, and dynamic modulation will be applied to the speed of this step-shaped LFO (width of steps).

h: Depth D-mod

This parameter determines whether the dynamic modulation of LFO modulation depth is applied to the low range, high range, or both ranges.

06: MltTap ChoDly (Multitap Chorus/Dly)

This effect has six chorus blocks with different LFO phases. You can produce a complex stereo image by setting a different delay time and depth for each block. You can control the delay output level via a modulation source.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Balance between effect sound and dry sound	D-mod
	Src	None...Tempo	Modulation source for the Tap output level, feedback amount, and effect balance ☞P.116	
	Amt	–100...+100	Modulation amount of effect balance ☞P.116	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...13.00Hz	LFO speed	
	Pan (Panning Preset)	1, 2, 3, 4	Specifies the stereo image of each Tap. ☞P.116	
c	Tap1(000) [ms] (Tap1(000) [msec])	0...570msec	Tap1 (LFO phase = 0) delay time	
	Dep (Depth)	0...30	Depth of Tap1 chorus	
	Status	On (Always On), Off (Always Off), On->Of (On→Off(dm)), Of->On (Off→On(dm))	Selects on, off, or modulation source for the control of Tap1 output. ☞P.116	D-mod
d	Tap2(180) [ms] (Tap2(180) [msec])	0...570msec	Tap2 (LFO phase = 180) delay time	
	Dep (Depth)	0...30	Depth of Tap2 chorus	
	Status	On (Always On), Off (Always Off), On->Of (On→Off(dm)), Of->On (Off→On(dm))	Selects on, off, or modulation source for the control of Tap2 output. ☞P.116	D-mod
e	Tap3(060) [ms] (Tap3(060) [msec])	0...570msec	Tap3 (LFO phase = 60) delay time	
	Dep (Depth)	0...30	Depth of Tap3 chorus	
	Status	On (Always On), Off (Always Off), On->Of (On→Off(dm)), Of->On (Off→On(dm))	Selects on, off, or modulation source for the control of Tap3 output. ☞P.116	D-mod
f	Tap4(240) [ms] (Tap4(240) [msec])	0...570msec	Tap4 (LFO phase = 240) delay time	
	Dep (Depth)	0...30	Depth of Tap4 chorus	
	Status	Always On, Always Off, On→Off(dm), Off→On(dm)	Selects on, off, or modulation source for the control of Tap4 output. ☞P.116	D-mod
g	Tap5(120) [ms] (Tap5(120) [msec])	0...570msec	Tap5 (LFO phase = 120) delay time	
	Dep (Depth)	0...30	Depth of Tap5 chorus	
	Status	On (Always On), Off (Always Off), On->Of (On→Off(dm)), Of->On (Off→On(dm))	Selects on, off, or modulation source for the control of Tap5 output. ☞P.116	D-mod

h	Tap6(300) [ms] (Tap6(300) [msec])	0...570msec	Tap6 (LFO phase = 300) delay time
	Dep (Depth)	0...30	Depth of Tap6 chorus
	Status	On (Always On), Off (Always Off), On->Of (On→Off(dm)), Of->On (Off→On(dm))	Selects on, off, or modulation source for the control of Tap6 output. ☞P.116 D-mod
i	Tap1 Feedback	−100...+100	Tap1 feedback amount D-mod
	Amt	−100...+100	Modulation amount of Tap1 feedback amount ☞P.116

a: Src
a: Amt
i: Amt

Tap output level, feedback amount and effect balance are controlled simultaneously via a modulation source.

b: Pan

This parameter selects combinations of stereo images of the tap outputs.

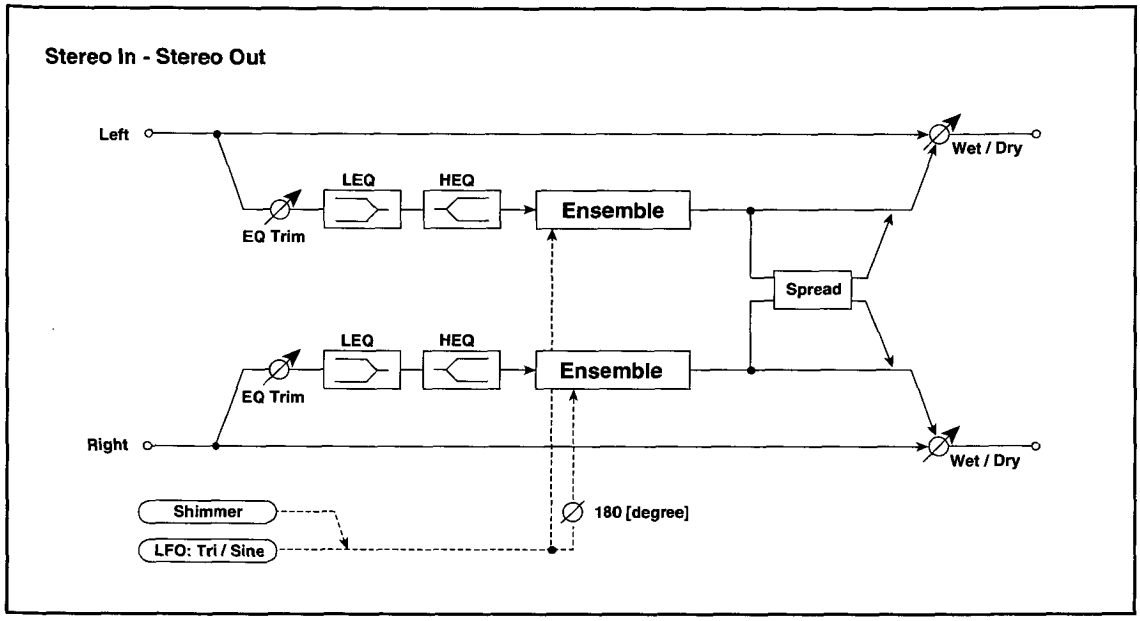
c: Status
d: Status
e: Status
f: Status
g: Status
h: Status

These parameters set the output status of each Tap.

On: Output is always on. (No modulation)
Off: Output is always off. (No modulation)
On→Of: Output level is switched from on to off depending on the modulation source.
Of→On: Output level is switched from off to on depending on the modulation source.
Combining these parameters, you can change from 4-phase chorus to two-tap delay by crossfading them gradually via the modulation source during a performance.

07: St.Ensemble (Stereo Ensemble)

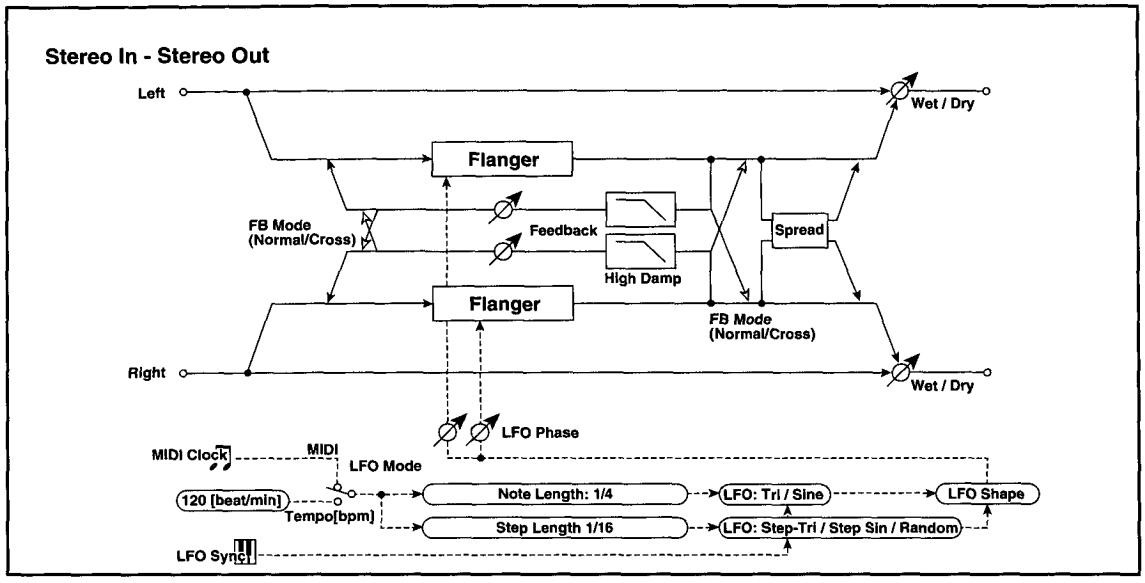
This is a stereo ensemble effect that has three chorus blocks each for the left and right channels.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Speed	1...100	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	Amt	–100...+100	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of LFO modulation depth	
	Amt	–100...+100	Modulation amount of LFO modulation depth	
d	Shimmer	0...100	Amount of shimmering of LFO waveform ☞P.29	
	LFO Waveform	Tri (Triangle), Sine	Selects LFO waveform.	
e	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High EQ gain	
f	EQ Trim	0...100	EQ input level	
	Spread	–100...+100	Sets the width of the stereo image of the effect sound. ☞P.60	

08: St.Tmpo Flang (St. Tempo Flanger)

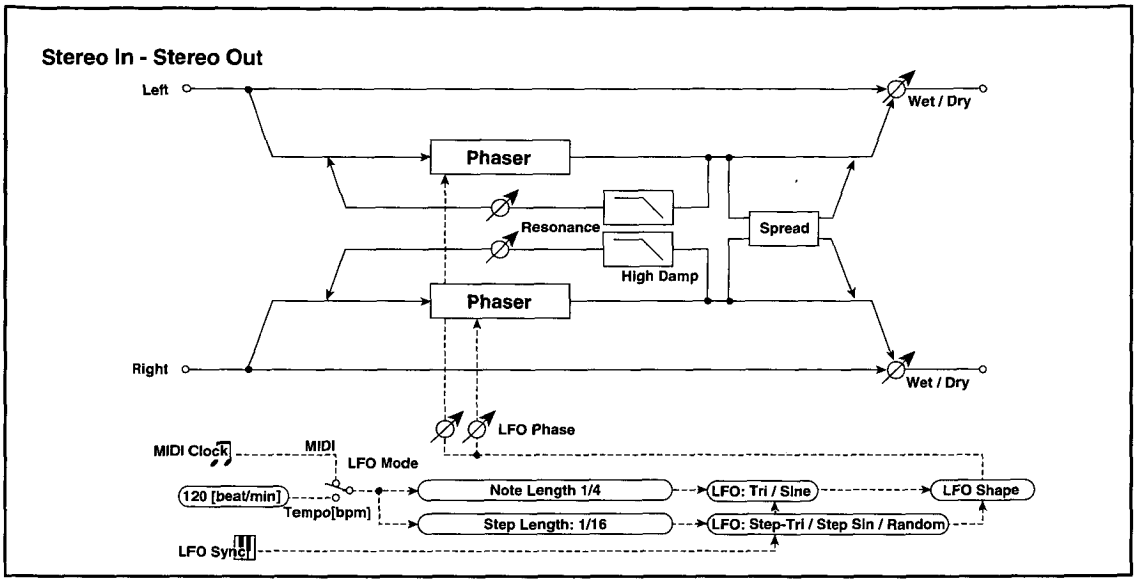
This is a stereo tempo flanger. You can select random or step waveforms for the LFO, and synchronize the speed of the random/step waveform with tempo. Also, synchronizing the LFO to note-on messages will produce a flanging effect with a fixed timing.



a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.23, 30	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay time from the original sound	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of LFO modulation depth	
	Amt	–100...+100	Modulation amount of LFO modulation depth	
d	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
e	LFO Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.31	
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.31	
f	Note Length (Length)	1...16 / 1...16	Sets the LFO cycle. LFO Cycle = Note Length x Whole Note. ☞P.31	
g	Step Length (Step)	1...16 / 1...32	Sets the LFO step cycle. LFO step Cycle = Step Length x Whole Note.	
h	LFO Sync	Off, On	LFO reset on/off ☞P.99	
	Src	None...Tempo	Modulation source that resets LFO	D-mod
i	LFO Wavform (LFO Waveform)	Tri (Triangle), Sine, StepTri (Step-Tri), StepSin (Step-Sin), Random	Selects LFO waveform. ☞P.65	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
j	L LFOphas[deg] (LFO Lch Phase [deg])	–180...+180	Left LFO phase after reset ☞P.99	
	R LFOphas[deg] (Rch Phase [deg])	–180...+180	Right LFO phase after reset	
k	FB Mode	Normal, Cross	Sets feedback routing. ☞P.64	
	Spread	–100...+100	Sets the width of the stereo image of effect sound. ☞P.60	

09: St.TmpoPhaser (St. Tempo Phaser)

This is a stereo tempo phaser. You can select random or step waveforms for the LFO, and synchronize the speed of the random/step waveform with tempo. Also, synchronizing the LFO to note-on messages will produce a phasing effect with a fixed timing.

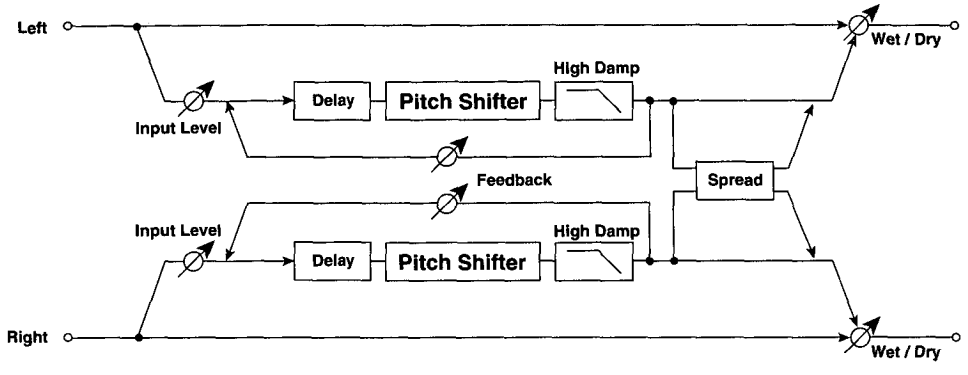


a	Wet/Dry	–Wet...–1:99, Dry, 1:99...Wet	Sets the balance between the effect and dry sounds. ☞P.33	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual	0...100	Sets the center frequency to which the effect is applied.	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of LFO modulation depth	
	Amt	–100...+100	Modulation amount of LFO modulation depth	
d	Resonance	–100...+100	Sets resonance amount. ☞P.33	
	High Damp[%]	0...100%	Resonance damping amount in the high range ☞P.33	
e	LFO Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and clock sync. ☞P.31	
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.31	
f	Note Length (Length)	1...16 / 1...16	Sets the LFO cycle. LFO Cycle = Note Length x Whole Note. ☞P.31	
g	Step Length (Step)	1...16 / 1...32	Sets the LFO step cycle. LFO step Cycle = Step Length x Whole Note.	
h	LFO Sync	Off, On	LFO reset on/off ☞P.99	
	Src	None...Tempo	Modulation source that resets LFO	D-mod
i	LFO Wavform (LFO Waveform)	Tri (Triangle), Sine, StepTri (Step-Tri),StepSin (Step-Sin), Random	Selects LFO waveform. ☞P.65	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
j	L LFOphas[deg] (LFO Lch Phase [deg])	–180...+180	Left LFO phase after reset ☞P.99	
	R LFOphas[deg] (Rch Phase [deg])	–180...+180	Right LFO phase after reset	
k	Spread	–100...+100	Sets the width of the stereo image of the effect sound. ☞P.60	

10: St.PitchShift (St. Pitch Shifter)

This is a stereo pitch shifter. The pitch shift amount for the left and right channels can be reversed from each other.

Stereo In - Stereo Out



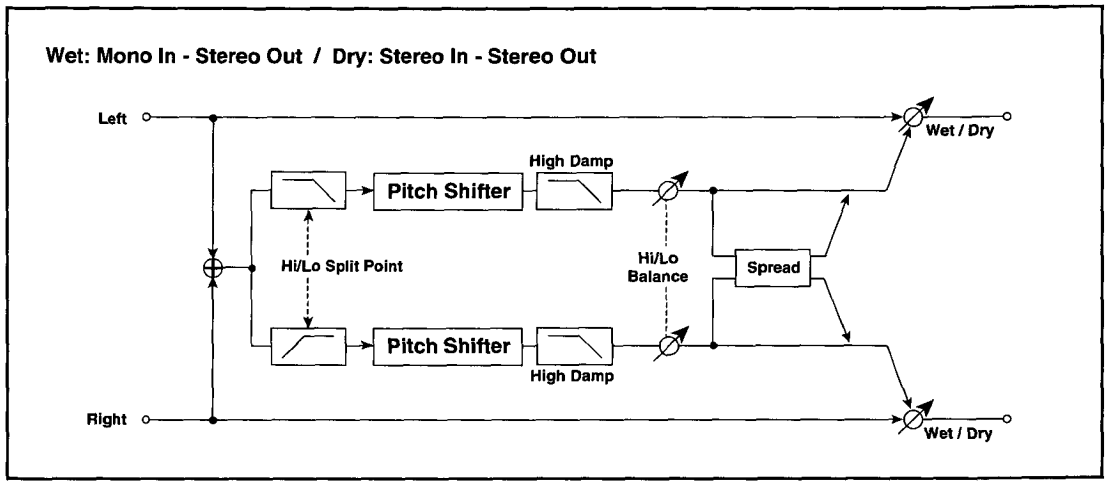
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Mode	*Slow, Medium, Fast*	*Switches Pitch Shifter mode.* ☞P.88	
	L/R Pitch	Normal, Up/Down	Determines whether or not the L/R pitch shift amount is inverted.	
c	Pitch[1/2tone] (Pitch Shift [1/2tone])	–24...+24	Sets the pitch shift amount in steps of a semitone. ☞P.88	D-mod
	Src	None...Tempo	Modulation source of pitch shift amount	
	Amt	–24...+24	Modulation amount of pitch shift amount	
d	Fine[cent]	–100...+100cent	Sets the pitch shift amount in steps of one cent. ☞P.88	D-mod
	Amt	–100...+100cent	Modulation amount of pitch shift amount	
e	L Dly Time[ms] (Lch Delay [msec])	0...1000msec	Sets the delay time for the left channel. ☞P.88	
	R Dly Time[ms] (Rch Delay [msec])	0...1000msec	Sets the delay time for the right channel.	
f	Feedback	–100...+100	Sets the feedback amount. ☞P.88	
	High Damp[%]	0...100%	Damping amount in the high range	
g	Input Level	0...100	Sets input level to the effect.	D-mod
	Src	None...Tempo	Selects the modulation source of input level.	
	Amt	–100...+100	*Modulation amount of input level*	
h	Spread	–100...+100	Sets the width of the stereo image of the effect sound. ☞P.60	

b: L/R Pitch

When you select Up/Down for this parameter, the pitch shift amount for the left channel will be reversed. If the pitch shift amount is positive, the pitch of the left channel is raised, and the pitch of the right channel is lowered.

11: 2Band P.Shift (2Band Pitch Shifter)

This pitch shifter sets an individual shift amount for the high and low input signal ranges. If you apply a detune effect to the high range of a string sound, and add the lower octave to the low range, a large ensemble sound is produced.



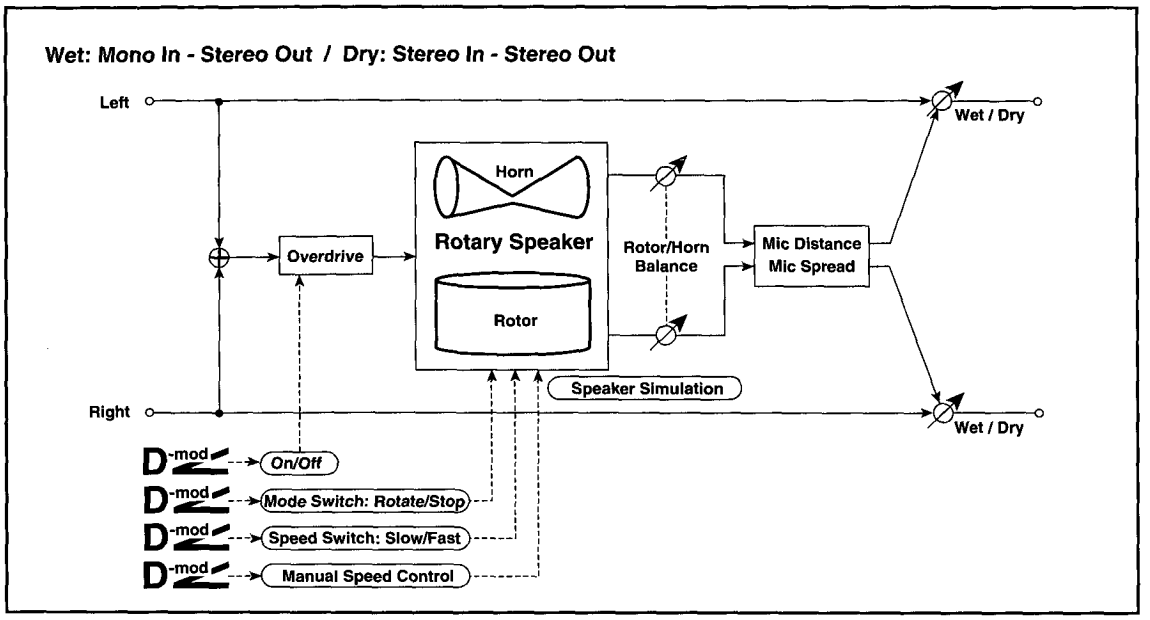
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Mode	Slow, Medium, Fast	Switches pitch shifter mode. ☞P.88	
c	Hi/LoSplitPoint (High/Low Split Point)	1...100	Splits frequencies between high and low ranges	
	Hi/Lo Blance (High/Low Balance)	Low, 1:99...99:1, High	Output balance between high and low ranges	
d	HiPtch[1/2tone] (High Pitch [1/2tone])	–24...+24	Sets pitch shift amount for the high range in steps of a semitone. ☞P.88	D-mod
	Src	None...Tempo	Modulation source of pitch shift amount	
	Amt	–24...+24	Modulation amount of pitch shift amount for the high range	
e	LoPtch[1/2tone] (Low Pitch [1/2tone])	–24...+24	Sets pitch shift amount for the low range in steps of a semitone. ☞P.88	D-mod
	Amt	–24...+24	Modulation amount of pitch shift amount for the low range	
f	Hi Fine[cent] (High Fine [cent])	–100...+100cent	Sets pitch shift amount for the low range in steps of one cent. ☞P.88	D-mod
	Amt	–100...+100cent	Modulation amount of pitch shift amount for the high range	
g	Lo Fine[cent] (Low Fine [cent])	–100...+100cent	Sets pitch shift amount for the low range in steps of one cent. ☞P.88	D-mod
	Amt	–100...+100cent	Modulation amount of pitch shift amount for the low range	
h	Hi High Damp[%] (High High Damp [%])	0...100%	High component damping amount in the high range	
	Lo High Damp[%] (Low High Damp [%])	0...100%	High component damping amount in the low range	
i	Spread	–100...+100	Sets the width of the stereo image of the effect sound. ☞P.121	

i: Spread

This parameter specifies the width of the stereo image of the effect sound. With a value of +100, the low range signal is output from the left channel and the high range signal from the right channel. With a value of 0, both channels will output a mix signal of low and high-range signals. With a negative value, the output channel of the low and high-range signals will be reversed.

12: RotarySP OD (Rotary Speaker OD)

This is a stereo rotary speaker effect. It has an internal speaker simulator that simulates overdrive (recreating the amp distortion) and characteristics of the rotary speaker, producing a very realistic rotary speaker sound.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Speed Switch	Slow, Fast	Switches the speaker rotation speed between slow and fast.	D-mod
	Src	None...Tempo	Modulation source that toggles between slow and fast.	
	Sw	Moment (Momentary), Toggle	*Selects the switching mode of the modulation source that toggles* between slow and fast. ☞P.40	
c	Mode Switch	Rotate, Stop	Switches between speaker rotation and stop.	D-mod
	Src	None...Tempo	Modulation source that toggles between rotation and stop	
	Sw	Moment (Momentary), Toggle	Selects the switching mode of the modulation source that toggles between rotation and stop. ☞P.91	
d	Overdrive	Off, On	Switches overdrive on/off.	D-mod
	Src	None...Tempo	Modulation source that switches overdrive on/off.	
	Sw	Moment (Momentary), Toggle	Selects the switching mode of the modulation source that switches overdrive on/off. ☞P.123	
e	Manu.Spd Src (ManualSpeedControl)	None...Tempo	Sets the modulation source in case the rotation speed is changed directly. ☞P.91	D-mod
	Rotor/Horn Bal (Rotor/Horn Balance)	Rotor, 1...99, Horn	Sets the volume level balance between the low-range rotor and high-range horn.	
f	Rotor Accel (Rotor Acceleration)	0...100	How quickly the rotor rotation speed in the low range is switched. ☞P.40	
	Rotor Ratio	Stop, 0.50...2.00	Adjusts the (low-range side) rotor rotation speed. Standard value is 1.0. Selecting "Stop" will stop the rotation.	
g	Horn Accel (Horn Acceleration)	0...100	How quickly the horn rotation speed in the high range is switched. ☞P.40	
	Horn Ratio	Stop, 0.50...2.00	Adjusts the (high-range side) horn rotation speed. Standard value is 1.0. Selecting "Stop" will stop the rotation.	
h	Mic Distance	0...50	Distance between the microphone and rotary speaker. ☞P.91	
	Mic Spread	0...50	Angle of left and right microphones	
i	Overdrive Gain	0...50	*Determines the degree of distortion.*	
	Overdrive Level	0...50	Overdrive output level	
j	Overdrive Tone	0...15	Tonal quality of overdrive	
	Speaker Sim (Speaker Simulator)	Off, On	Switches speaker simulation on/off.	

d: Sw

This parameter determines how to switch on/off the overdrive via a modulation source.

When Sw = Moment, overdrive is applied only when a pedal or joystick of the connected MIDI keyboard is held in position.

MIDI Only when the value for the modulation source is 64 or higher, the overdrive effect is applied.

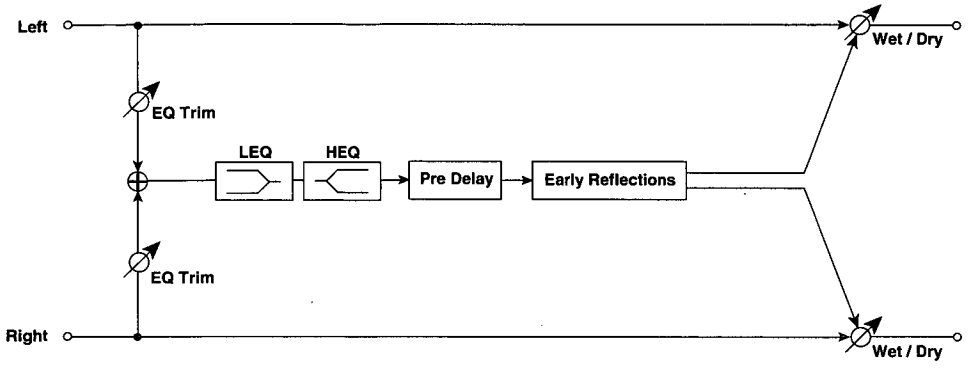
When Sw = Toggle, overdrive is turned on/off each time the pedal or joystick of the connected MIDI keyboard is operated.

MIDI Each time when the value for the modulation source exceeds 64, the overdrive effect is switched on/off.

13: Early Reflect (Early Reflections)

This is a stereo early reflection effect. Compared to the Early Reflections of size 2, this effect has twice the number of reflections, thus creating a smooth, dense sound.

Wet: Mono In - Stereo Out / Dry: Stereo In - Stereo Out



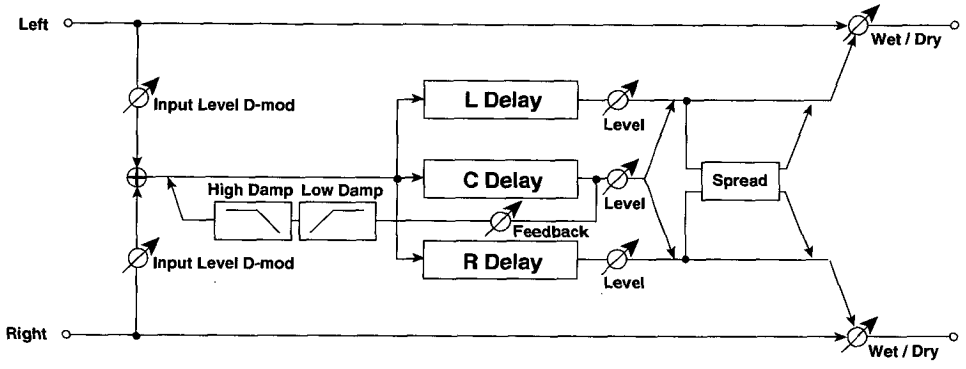
a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.
	Src	None...Tempo	Modulation source of effect balance
	Amt	–100...+100	Modulation amount of effect balance
b	Type	Sharp, Loose, Modulated, Reverse	Selects the decay curve for the early reflection. ☞P.43
	ER Time[ms] (ER Time [msec])	10...1600msec	Time length of early reflection
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Time taken from the original sound to the first early reflection
	EQ Trim	0...100	Input level of EQ applied to the effect sound
d	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15.0...+15.0dB	Low range EQ gain
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15.0...+15.0dB	High range EQ gain

D-mod

14: LCR LongDelay (L/C/R Long Delay)

This multitap delay outputs three Tap signals to left, right and center respectively. You can set a maximum of 2,730msec for the delay time.

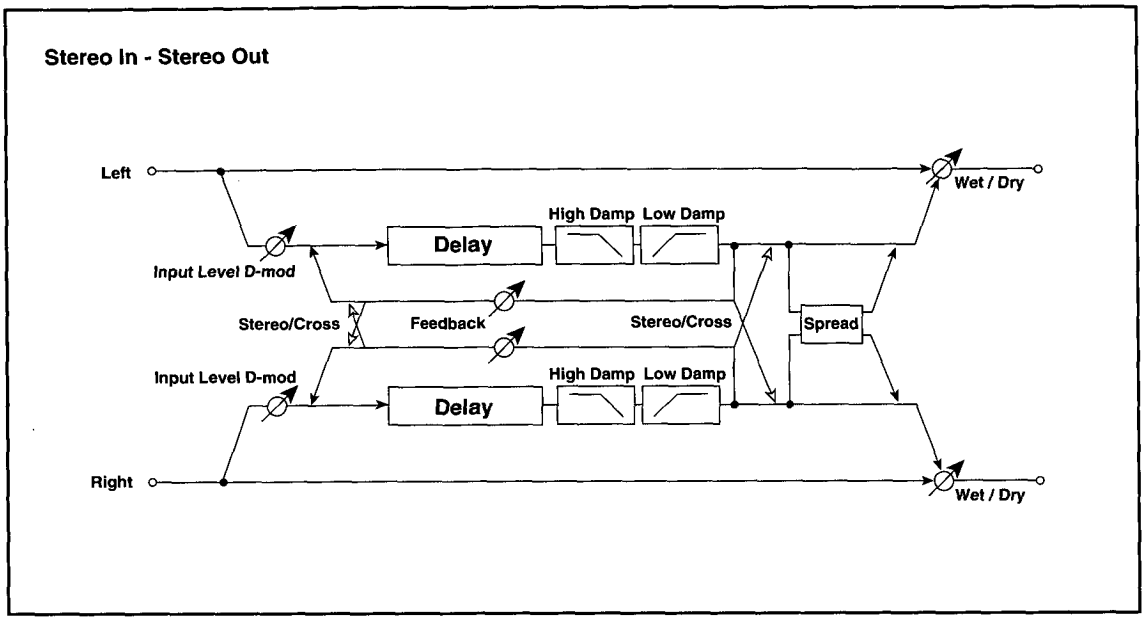
Wet: Mono In - Stereo Out / Dry: Stereo In -Stereo Out



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	L Time[ms] (L Delay Time [msec])	0...2730msec	Sets the TapL delay time.	
	L Level (Level)	0...50	TapL output level	
c	C Time[ms] (C Delay Time [msec])	0...2730msec	Sets the TapC delay time.	
	C Level (Level)	0...50	TapC output level	
d	R Delay Time [msec]	0...2730msec	Sets the TapR delay time.	
	R Level (Level)	0...50	TapR output level	
e	Feedback	−100...+100	Sets the TapC feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the TapC feedback amount	
	Amt	−100...+100	Modulation amount of the TapC feedback amount	
f	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
g	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	−100...+100	Modulation amount of the input level	
h	Spread	0...50	Sets the width of the stereo image of the effect sound. ☞P.60	

15: St.Long Delay (Stereo Long Delay)

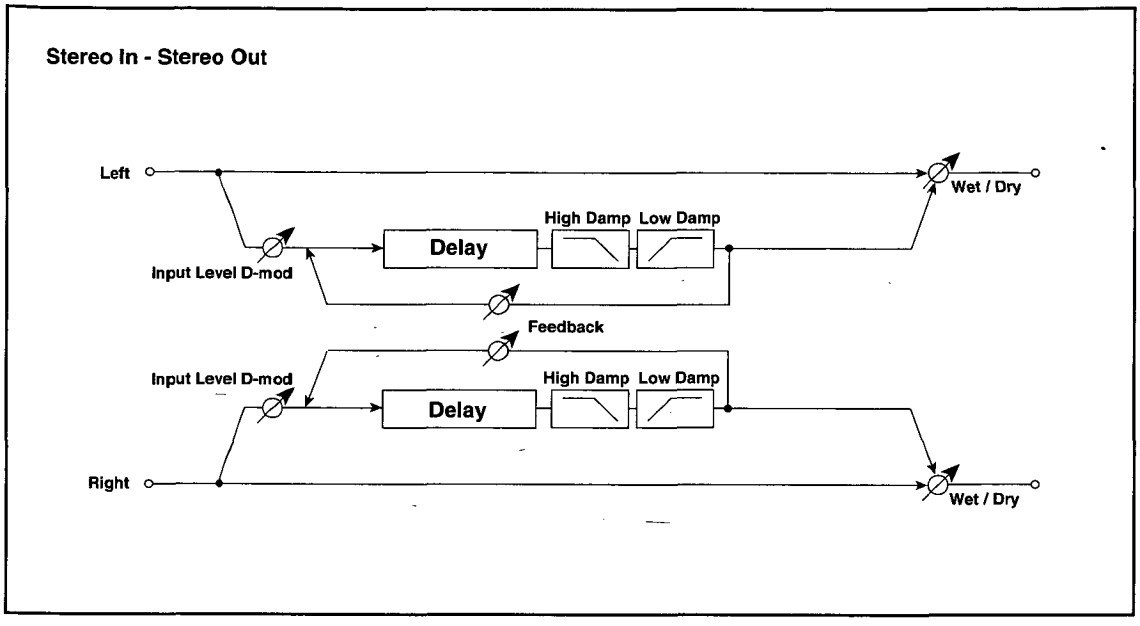
This is a stereo delay, and can by used as a cross-feedback delay effect in which the delay sounds cross over between left and right by changing the feedback routing. You can set a maximum of 1,360msec for the delay time.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Stereo/Cross	Stereo, Cross	Switches between stereo delay and cross-feedback delay.	
c	L Time[ms] (L Delay Time [msec])	0.0...1360.0msec	Sets the delay time for the left channel.	
	R Time[ms] (R Delay Time [msec])	0.0...1360.0msec	Sets the delay time for the right channel.	
d	Feedback	−100...+100	Sets feedback amount.	D-mod
	Src	None...Tempo	Modulation source of feedback amount	
	Amt	−100...+100	Modulation amount of feedback amount	
e	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
f	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	−100...+100	Modulation amount of the input level	
g	Spread	−100...+100	Sets the width of the stereo image of the effect sound. ☞P.60	D-mod
	Src	None...Tempo	Modulation source of stereo image width of the effect sound	
	Amt	−100...+100	Modulation amount of stereo image width of the effect sound	

16: Dual Long Dly (Dual Long Delay)

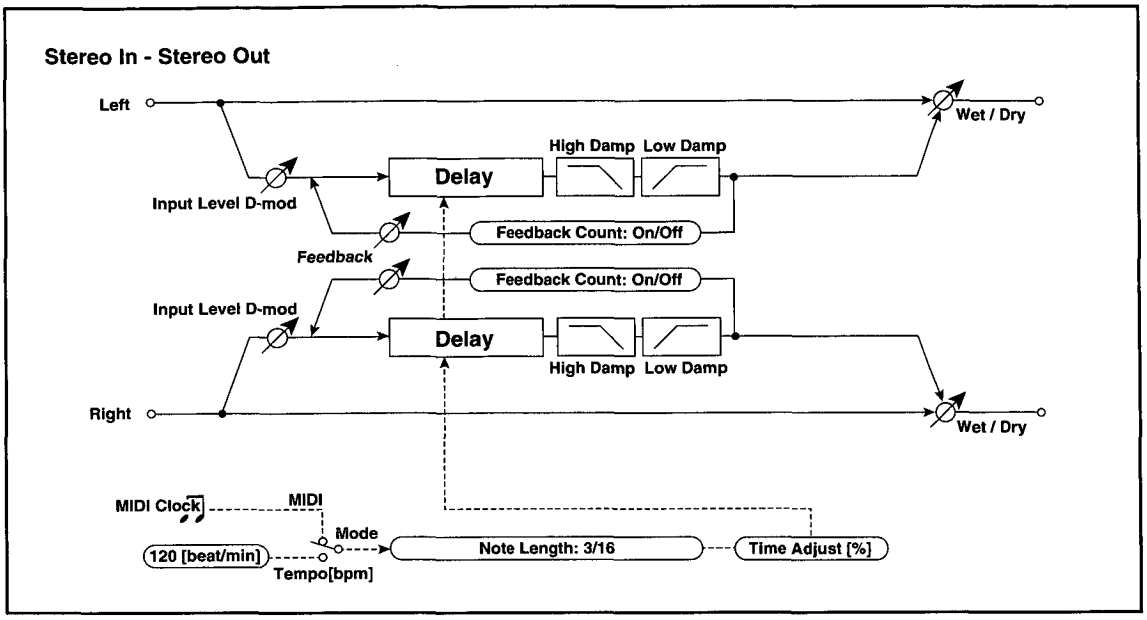
This 2-channel delay allows you to set the delay time for left and right channels independently. You can set a maximum of 1,360msec for the delay time.



a	L Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds for the left channel.	D-mod
	Src	None...Tempo	Modulation source of left/right effect balance	
	Amt	-100...+100	Modulation amount of effect balance for the left channel	
b	R Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds for the right channel.	D-mod
	Amt	-100...+100	Modulation amount of effect balance for the right channel	
c	L Time[ms] (L Delay Time [msec])	0.0...1360.0msec	Sets the delay time for the left channel.	
	R Time[ms] (R Delay Time [msec])	0.0...1360.0msec	Sets the delay time for the right channel.	
d	L Feedback	-100...+100	Sets the feedback amount for the left channel.	
	R Feedback	-100...+100	Sets the feedback amount for the right channel.	
e	L High Damp[%]	0...100%	Damping amount in the high range for the left channel ☞P.41	
	R High Damp[%]	0...100%	Damping amount in the high range for the right channel	
f	L Low Damp[%]	0...100%	Damping amount in the low range for the left channel ☞P.41	
	R Low Damp[%]	0...100%	Damping amount in the low range for the right channel	
g	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the left and right input level ☞P.41	D-mod
	AmtL	-100...+100	Modulation amount of the input level for the left channel ☞P.41	
	AmtR	-100...+100	Modulation amount of the input level for the right channel	

17: St.TempoDelay (St. Tempo Delay)

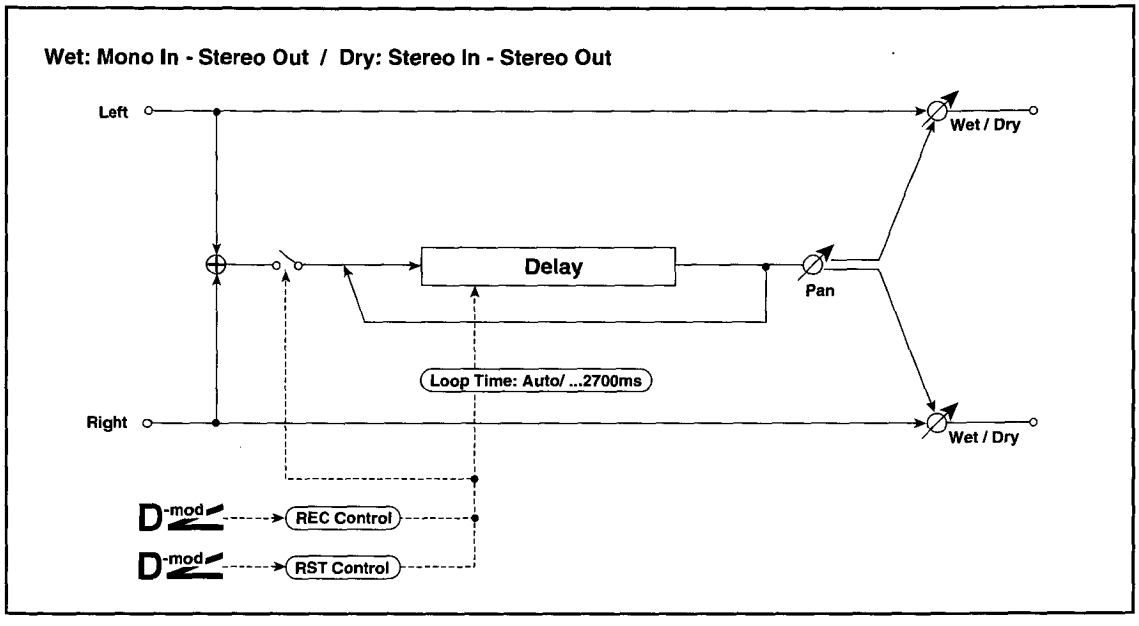
This is a stereo tempo delay.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	–100...+100	Modulation amount of effect balance	
b	Mode	Tempo[bpm] (Manual), MIDI (D-mod)	Switches between the specified tempo and MIDI clock sync. ☞P.96	
	Tempo[bpm] (Tempo [beat/min])	30...250 beat/min	Tempo when LFO Mode = Tempo[bpm] ☞P.96	
c	Note Length (Length)	1...96 / 1...96	Sets the delay time. Delay time = Note Length x Whole Note. ☞P.97	
d	Time Adj.[%] (Time Adjust [%])	–10.00...+10.00%	Fine adjustment of delay time	
	Delay 1362ms	*OVER!!*	*Delay time upper limit/error indication* ☞P.97	
e	Feedback	–100...+100	Sets the feedback amount.	D-mod
	Src	None...Tempo	Modulation source of feedback amount	
	Amt	–100...+100	Modulation amount of feedback amount	
f	Feedback Count	Off, On	Selects whether the number of feedback times is counted or not. ☞P.97	
	Count[times]	0...96	Number of feedback times ☞P.97	
g	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
h	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	–100...+100	*Modulation amount of the input level*	

18: Hold Delay

This effect records the input signal and plays it back repeatedly. You can control the start of recording and reset via a modulation source. Easy to use for real-time performances.



a	Wet/Dry	Dry, 1:99...99:1, Wet	Sets the balance between the effect and dry sounds.	D-mod
	Src	None...Tempo	Modulation source of effect balance	
	Amt	−100...+100	Modulation amount of effect balance	
b	Loop Time[ms] (Loop Time [msec])	Auto, 1...2700msec	Sets Automatic loop time setup mode or specifies loop time. ☞P.129	D-mod
c	REC Ctrl Src (REC Control Src)	None...Tempo	Selects control source for recording. ☞P.129	D-mod
	RST Ctrl Src (RST Control Src)	None...Tempo	Selects control source for reset. ☞P.130	
d	Manual REC (Manual REC Control)	REC Off, REC On	Recording switch ☞P.129	
	Manual RST (Manual RST Control)	Off, RESET	Reset switch ☞P.130	
e	Pan	L100...L1, C, R1...R100	Sets the stereo image of the effect.	D-mod
	Src	None...Tempo	Modulation source of stereo image of the effect	
	Amt	−100...+100	Modulation amount of stereo image of the effect	

b: Loop Time[ms]

With Auto, the loop time is automatically set. Otherwise, you can specify the loop time.

When Auto is selected, the Loop Time is automatically set to the time it takes for a performance recorded while the Modulation Source or Manual REC is on. However, if the time length exceeds 2,700msec, the loop time will be automatically set to 2,700msec.

c: REC Ctrl Src
d: Manual REC

REC Ctrl Src selects the modulation source that controls recording. If this modulation is on, or if Manual REC is set to REC On, you can record the input signal. If a recording has already been carried out, additional signals will be overdubbed.

MIDI The effect is off when a value for the modulation source specified for the REC Ctrl Src parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

c: RST Ctrl Src
d: Manual RST

The RST Ctrl Src parameter specifies the modulation source that controls the reset operation. When you set this modulatoin source to On, or Manual RST to RST On, you can erase what you recorded. If the Loop Time parameter has been set to Auto, the loop time is also reset.

MIDI The effect is off when a value for the modulation source specified for the RST Ctrl Src parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

"Hold" procedure (when Loop Time = Auto)

Select the following options for each parameter:

① b: Loop Time[ms] = Auto
c: REC Ctrl Src = JS+Y#1
c: RST Ctrl Src = JS–Y#2
d: Manual REC = REC Off
d: Manual RST = RESET
It should be noted that all recordings will be deleted while Reset is On.

② d: Manual RST = Off
Reset is cancelled and the unit enters Rec ready mode.

③ Push the joystick of the connected MIDI keyboard in the +Y direction (forward) and play a phrase you wish to hold. When you pull the joystick to its original position, the recording will be finished and the phrase you just played will be held.
Loop Time is automatically set only for the first recording after resetting. If the time length exceeds 2,700msec, Loop Time will be automatically set to 2,700msec. (If you have set a: Loop Time to 1–2,700msec, the specified loop time will be used regardless of the time taken from pushing the joystick forward until it is pulled back. However, the recording method remains the same. The phrase being played while the joystick is pushed forward will be held.)

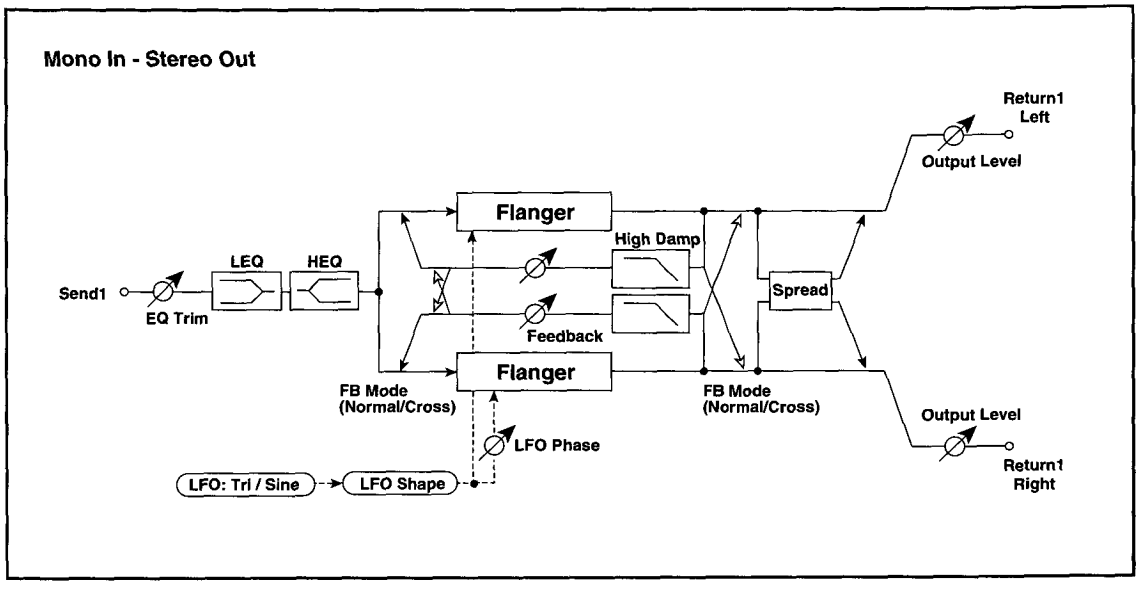
④ If you made a mistake during recording, pull the joystick in the –Y direction (back) to reset. In this way, the recording will be erased. Repeat step 3 again.

⑤ The recorded phrase will be repeated again and again. You can use this to create an accompaniment.

⑥ By pushing the joystick in the +Y direction (forward), you can also overdub performances over the phrase that is being held.

00: Flanger

This effect is a monaural-in/stereo-out flanger, with a two-band equalizer, that allows you to control the tonal quality of the effect sound.

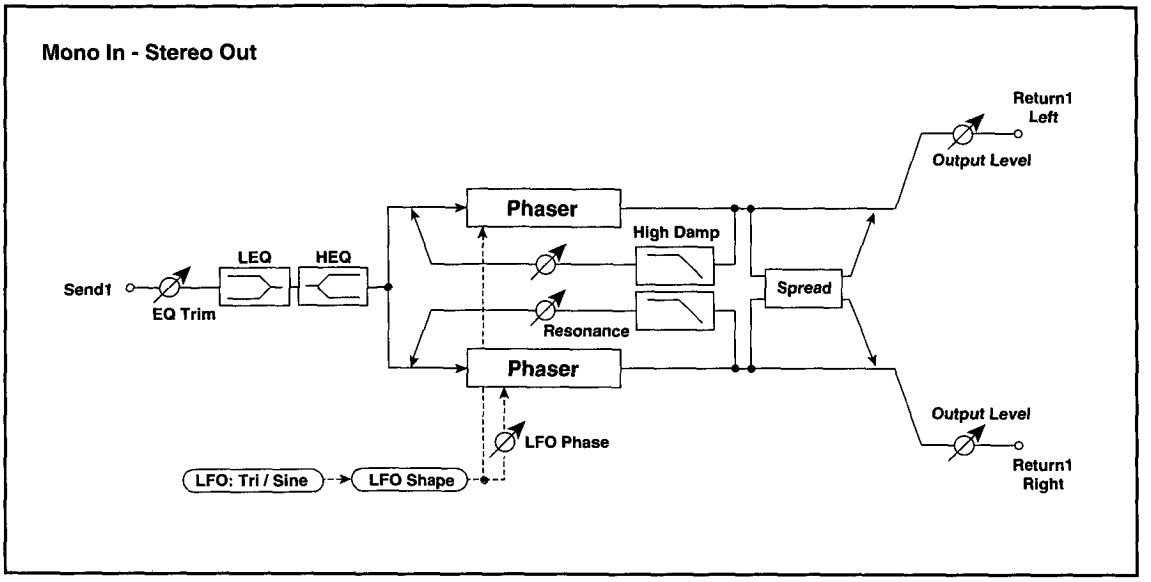


a	Output Level	–100...+100	Sets the balance between the effect and dry sounds. ☞P.30, 131	D-mod
	Src	None...Tempo	Modulation source of effect balance.	
	Amt	–100...+100	Modulation amount of effect balance	
b	Delay Time[ms] (Delay Time [msec])	0.0...50.0msec	Delay from the original sound	
	Depth	0...100	Depth of LFO modulation	
c	Feedback	–100...+100	Feedback amount ☞P.30	
	High Damp[%]	0...100%	Feedback damping amount in the high range ☞P.30	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed.	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
f	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
	FB Mode	Normal, Cross	Sets the feedback routing. ☞P.64	
g	LEQ Gain[dB] (LEQ [dB])	–15...+15dB	Low-EQ gain	
	HEQ Gain[dB] (HEQ [dB])	–15...+15dB	High-EQ gain	
h	EQ Trim	0...100	2-band EQ input level	
	Spread	0...100	Sets the width of the effect sound's stereo image. ☞P.60	

a: Output Level When this parameter is set in the range of values from –100 to –1, the effect sound will be output with its phase reversed.

01: Phaser

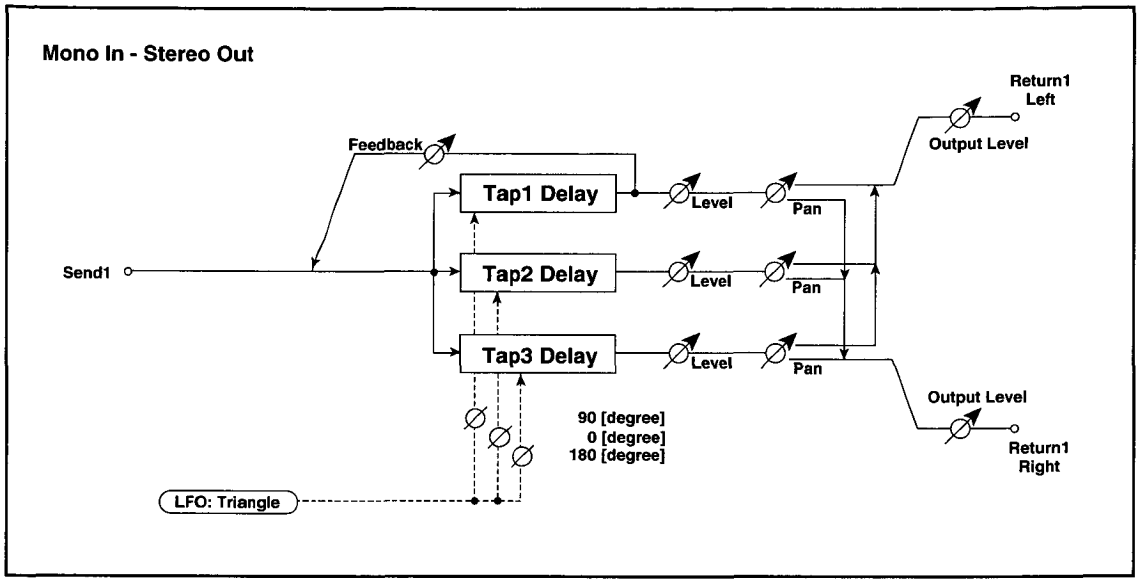
This effect is a monaural-in/stereo-out phaser, with a two-band equalizer, that allows you to control the tonal quality of the effect sound.



a	Output Level	–100...+100	Sets the balance between the effect and dry sounds. ☞P.33, 131	D-mod
	Src	None...Tempo	Modulation source of effect balance.	
	Amt	–100...+100	Modulation amount of effect balance	
b	Manual	0...100	Sets the frequency to which the effect is applied.	
	Depth	0...100	Depth of LFO modulation	
c	Resonance	–100...+100	Sets the resonance amount. ☞P.33	
	High Damp[%]	0...100%	Resonance damping amount in the high range ☞P.33	
d	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed. AutoFade is available.	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
e	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Shape	–100...+100	Determines how much the LFO waveform is changed. ☞P.30	
f	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right ☞P.60	
g	LEQ Gain[dB] (LEQ [dB])	–15...+15dB	Low-EQ gain	
	HEQ Gain[dB] (HEQ [dB])	–15...+15dB	High-EQ gain	
h	EQ Trim	0...100	2-band EQ input level	
	Spread	0...100	Sets the width of the effect sound's stereo image. ☞P.60	

02: Multitap Cho/Dly (Multitap Chorus/Dly)

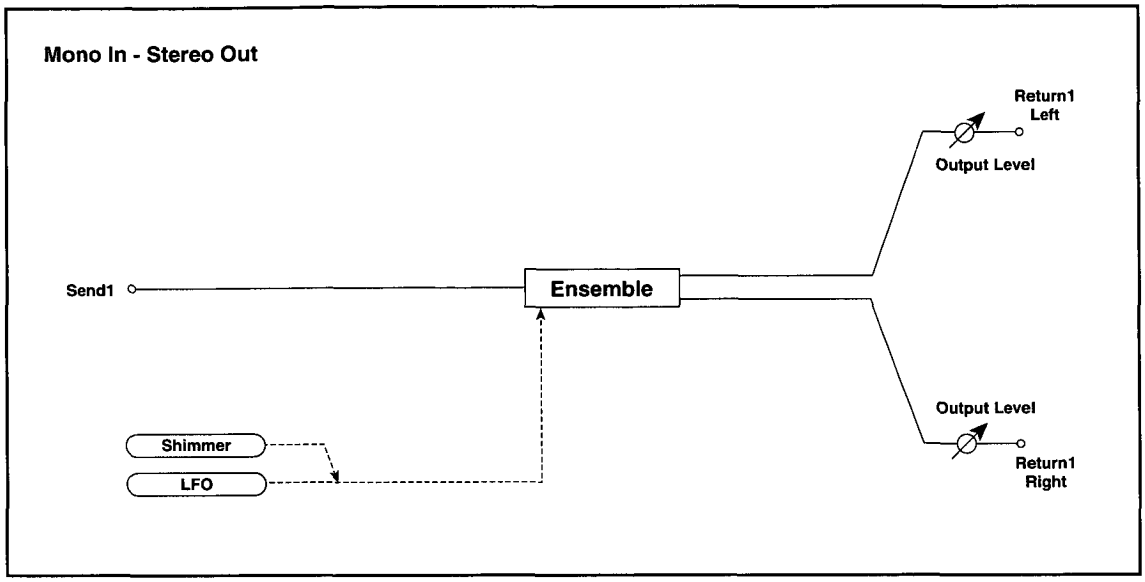
This effect has three chorus blocks with different LFO phases. You can create a complex stereo image by setting each block's delay time, depth, output level, and pan individually. You can also set some of the chorus blocks to combine the chorus and delay effects.



a	Output Level	0...100	Output level of effect sound	D-mod
	Src	None...Tempo	Modulation source of output level	
	Amt	–100...+100	Modulation amount of output level	
b	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	
c	Tap1(090) [ms] (Tap1(090) [msec])	0...570msec	Tap1 (LFO phase=90 degrees) delay time	
	Dp (Depth)	0...100	Tap1 chorus depth	
	Lv (Level)	0...100	Tap1 output level	
	Pan	L6...L1, C, R1...R6	Tap1 stereo image	
d	Tap2(000) [ms] (Tap2(000) [msec])	0...570msec	Tap2 (LFO phase=0 degrees) delay time	
	Dp (Depth)	0...100	Tap2 chorus depth	
	Lv (Level)	0...100	Tap2 output level	
	Pan	L6...L1, C, R1...R6	Tap2 stereo image	
e	Tap3(180) [ms] (Tap3(180) [msec])	0...570msec	Tap3 (LFO phase=180 degrees) delay time	
	Dp (Depth)	0...100	Tap3 chorus depth	
	Lv (Level)	0...100	Tap3 output level	
	Pan	L6...L1, C, R1...R6	Tap3 stereo image	
f	Tap1 Feedback	–100...+100	Tap1 feedback amount	D-mod
	Src	None...Tempo	Modulation source of Tap1 feedback amount	
	Amt	–100...+100	Modulation amount of Tap1 feedback amount	

03: Ensemble

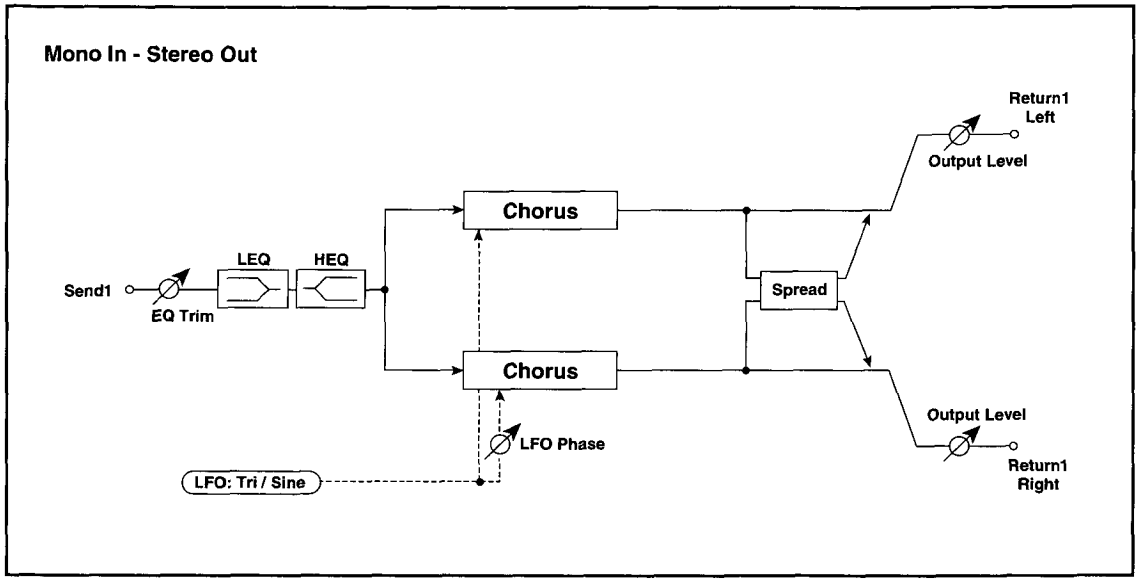
This Ensemble effect has three chorus blocks, and adds a three dimensional depth and spread to the sound, since the signal is output from the left, right, and center.



a	Output Level	0...100	Output level of effect sound	D-mod
	Src	None...Tempo	Modulation source of output level	
	Amt	–100...+100	Modulation amount of output level	
b	Speed	1...100	LFO speed	D-mod
	Src	None...Tempo	Modulation source of LFO speed	
	Amt	–100...+100	Modulation amount of LFO speed	
c	Depth	0...100	Depth of LFO modulation	D-mod
	Src	None...Tempo	Modulation source of the LFO modulation depth	
	Amt	–100...+100	Modulation amount of the LFO modulation depth	
d	Shimmer	0...100	Amount of shimmer of the LFO waveform ☞P.29	

04: Chorus

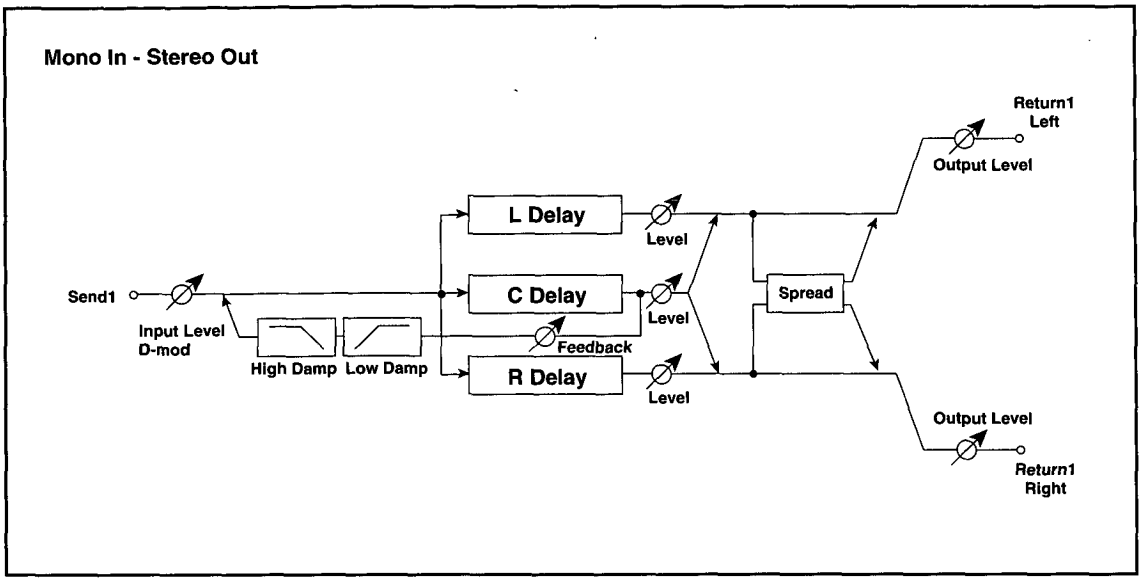
This is a monaural-in/stereo-out chorus. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	Output Level	–100...+100	Output level of the effect sound	☞P.131
	Src	None...Tempo	Modulation source of output level	
	Amt	–100...+100	Modulation amount of output level	
b	L Pre Dly[ms] (L Pre Delay [msec])	0.0...50.0msec	Delay time for the left channel	☞P.60
	R Pre Dly[ms] (R Pre Delay [msec])	0.0...50.0msec	Delay time for the right channel	☞P.60
c	LFO Freq[Hz] (LFO Frequency [Hz])	0.02...20.00Hz	LFO speed	
	Src	None...Tempo	Modulation source of LFO speed.	
	A (Amt)	–20.00...+20.00Hz	Modulation amount of LFO speed	
d	Depth	0...100	Depth of LFO modulation	
	Src	None...Tempo	Modulation source of the LFO modulation depth.	
	Amt	–100...+100	Modulation amount of the LFO modulation depth	
e	LFO Waveform	Tri (Triangle), Sine	Selects LFO Waveform.	
	LFO Phase[deg] (LFO Phase [degree])	–180...+180	LFO phase difference between the left and right	☞P.60
f	LEQ Gain[dB] (Pre LEQ Gain [dB])	–15...+15dB (–15.0...+15.0dB)	Low-EQ gain	
	HEQ Gain[dB] (Pre HEQ Gain [dB])	–15...+15dB (–15.0...+15.0dB)	High-EQ gain	
g	EQ Trim	0...100	EQ input level	
	Spread	–100...+100	Sets the spread of the stereo image of the effect sound.	☞P.60

05: L/C/R Delay

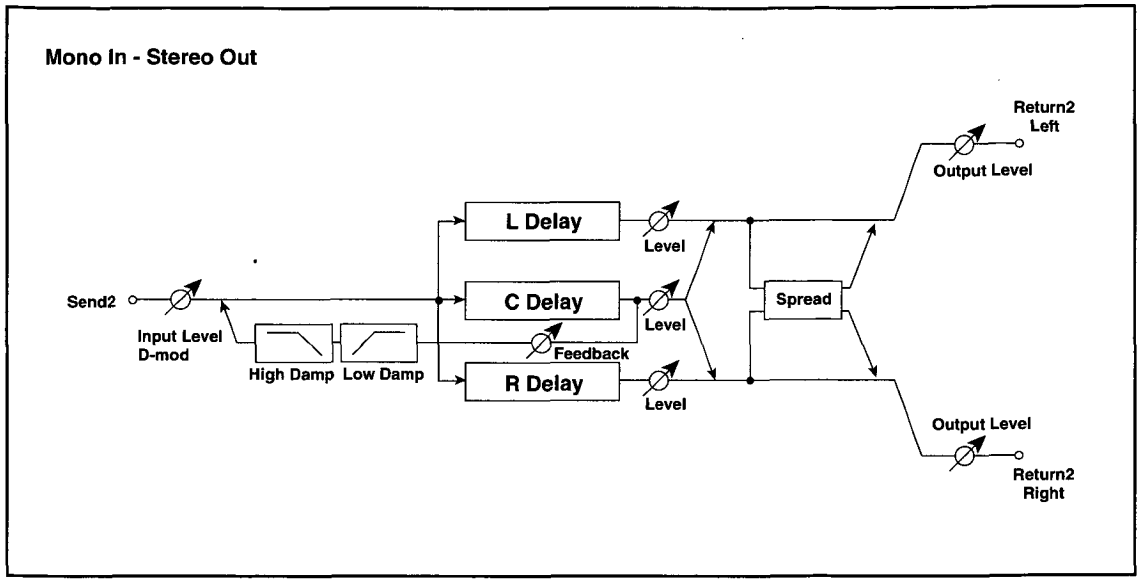
This multitap delay outputs three Tap signals to the left, right and center respectively.



a	Output Level	0...100	Output level of the effect sound	D-mod
	Src	None...Tempo	Modulation source of output level	
	Amt	–100...+100	Modulation amount of output level	
b	L Time[ms] (L Delay Time [msec])	0...680msec	Sets the TapL delay time.	
	L Level (Level)	0...50	TapL output level	
c	C Time[ms] (C Delay Time [msec])	0...680msec	Sets the TapC delay time.	
	C Level (Level)	0...50	TapC output level	
d	R Time[ms] (R Delay Time [msec])	0...680msec	Sets the TapR delay time.	
	R Level (Level)	0...50	TapR output level	
e	Feedback	–100...+100	Sets the TapC feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the TapC feedback amount	
	Amt	–100...+100	Modulation amount of the TapC feedback amount	
f	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
g	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	–100...+100	Modulation amount of the input level	
h	Spread	0...50	Sets the width of the stereo image of the effect sound. ☞P.60	

00: L/C/R Long Delay

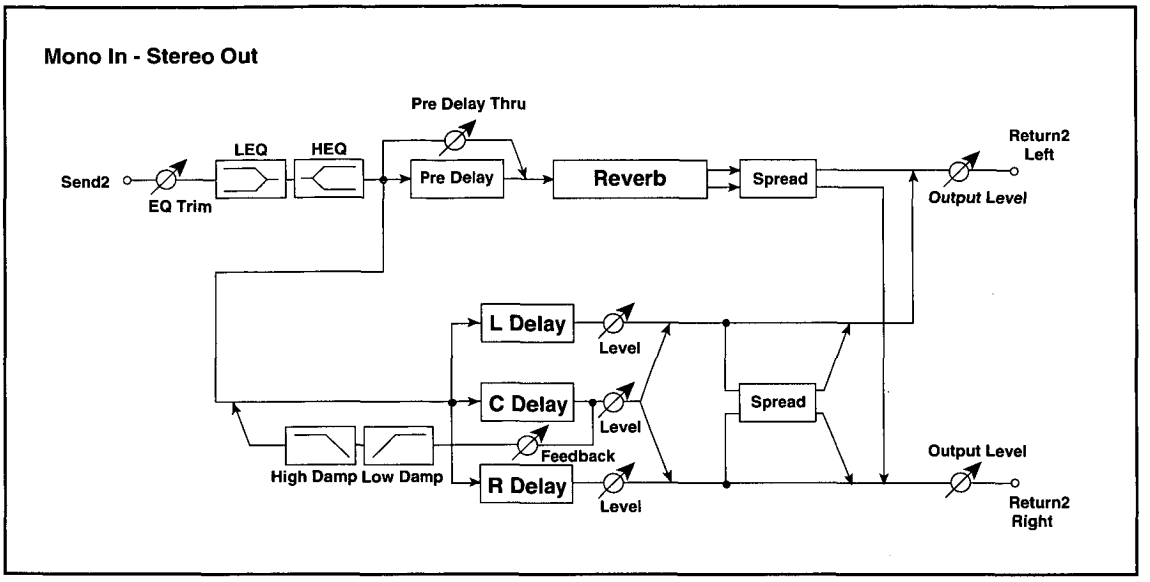
This multitap delay outputs three Tap signals to the left, right and center respectively. Maximum delay time is 2,000msec.



a	Output Level	0...100	Output level of effect sound	D-mod
	Src	None...Tempo	Modulation source of output level	
	Amt	–100...+100	Modulation amount of output level	
b	L Time[ms] (L Delay Time [msec])	0...2000msec	Sets the TapL delay time.	
	L Level (Level)	0...50	TapL output level	
c	C Time[ms] (C Delay Time [msec])	0...2000msec	Sets the TapC delay time.	
	C Level (Level)	0...50	TapC output level	
d	R Time[ms] (R Delay Time [msec])	0...2000msec	Sets the TapR delay time.	
	R Level (Level)	0...50	TapR output level	
e	Feedback	–100...+100	Sets the TapC feedback amount.	D-mod
	Src	None...Tempo	Modulation source of the TapC feedback amount	
	Amt	–100...+100	Modulation amount of the TapC feedback amount	
f	High Damp[%]	0...100%	Damping amount in the high range ☞P.41	
	Low Damp[%]	0...100%	Damping amount in the low range ☞P.41	
g	In Level Src (Input Level D-mod: Src)	None...Tempo	Modulation source of the input level ☞P.41	D-mod
	Amt	–100...+100	Modulation amount of the input level	
h	Spread	0...50	Sets the width of the stereo image of the effect sound. ☞P.60	

01: Delay/Reverb

This effect is a combination of a multitap delay and a hall-type reverb.



a	Output Level	0...100	Output level of the effect sound	D-mod
	Src	None...Tempo	Modulation source of output level	
	Amt	–100...+100	Modulation amount of output level	
b	L Dly Time[ms] (L Delay Time [msec])	0...680msec	Sets the TapL delay time.	
	L Level (Level)	0...30	TapL output level	
c	C Dly Time[ms] (C Delay Time [msec])	0...680msec	Sets the TapC delay time.	
	C Level (Level)	0...30	TapC output level	
d	R Dly Time[ms] (R Delay Time [msec])	0...680msec	Sets the TapR delay time.	
	R Level (Level)	0...30	TapR output level	
e	Feedback	–100...+100	Sets the TapC feedback amount.	
f	High Damp[%]	0...100%	Delay damping amount in the high range	☞P.41
	Low Damp[%]	0...100%	Delay damping amount in the low range	
g	Reverb Time[s] (Reverb Time [sec])	0.1...10.0	Sets the period of reverberation time.	
	High Damp[%]	0...100%	Reverberation damping amount in the high range	
h	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Reverb delay time	☞P.104
	Pre Delay Thru	0...30	Mix ratio of non-delayed reverb sound	
i	LEQ Gain[dB] (LEQ [dB])	–15...+15	Reverb gain for the low-EQ	
	HEQ Gain[dB] (HEQ [dB])	–15...+15	Reverb gain for the high-EQ	
j	EQ Trim	0...30	Reverb input level to EQ	
k	Spread	0...30	Sets the width of the stereo image of the effect sound.	☞P.138
	Spread Ctrl (Spread Control)	Delay, Reverb, Both	Determines whether delay output, reverb output, or both outputs are controlled for the width of the stereo image.	

k: Spread
k: Spread Ctrl

These parameters set the width of the stereo image of the effect sound. The widest image can be obtained with a value of 30. With a value of 0, the effect sound will be output from the center.

When the Spread Ctrl = Delay, you can control the width of the stereo image of the delay output only. In this case, the width of the reverb stereo image is set to maximum.

When the Spread Ctrl = Reverb, you can control the width of the stereo image of the reverb output only. In this case, the width of the delay stereo image is set to maximum.

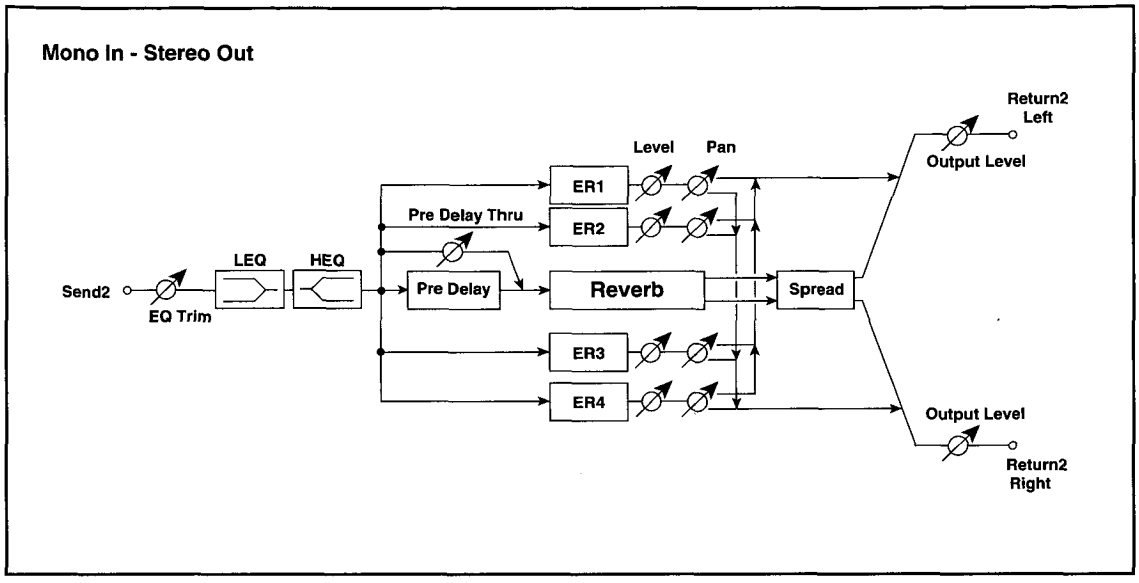
When the Spread Ctrl = Both, you can control the width of the stereo image of both the delay and reverb outputs.

02: Reverb-Room

This is a room-type reverberation. Setting the four types of early reflections individually allows you to simulate the sound reflections on the front, rear, left, and right walls of a room, creating a more realistic reverb sound. You can also adjust the width of the stereo image of the reverb sound.

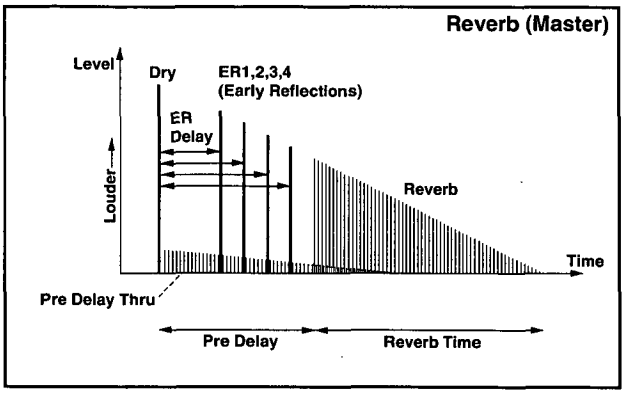
03: Reverb-BrightRoom (Reverb-Bright Room)

This is a bright, room-type reverb. Setting the four types of early reflections individually allows you to simulate the sound reflections on the front, rear, left, and right walls of a room, creating a more realistic reverb sound. You can also adjust the width of the stereo image of the reverb sound.



a	Output Level	0...100	Output level of the effect sound
	Src	None...Tempo	Modulation source of output level
	Amt	−100...+100	Modulation amount of output level
b	Reverb Time[s] (Reverb Time [sec])	0.1...3.0sec	Sets the reverberation time.
	High Damp[%]	0...100%	Damping amount in the high range.
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Delay time from the dry sound ☞P.140
	Pre Delay Thru	0...30	Mix ratio of non-delay sound
d	ER1 Delay[ms] (ER1 Delay [msec])	0...200msec	Delay time of early reflection 1 ☞P.140
	Level	0...30	Early reflection 1 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 1
e	ER2 Delay[ms] (ER2 Delay [msec])	0...200msec	Delay time of early reflection 2 ☞P.140
	Level	0...30	Early reflection 2 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 2
f	ER3 Delay[ms] (ER3 Delay [msec])	0...200msec	Delay time of early reflection 3 ☞P.140
	Level	0...30	Early reflection 3 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 3
g	ER4 Delay[ms] (ER4 Delay [msec])	0...200msec	Delay time of early reflection 4 ☞P.140
	Level	0...30	Early reflection 4 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 4
h	LEQ Gain[dB] (LEQ [dB])	−15...+15dB	Low-EQ gain
	HEQ Gain[dB] (HEQ [dB])	−15...+15dB	High-EQ gain
i	EQ Trim	0...30	EQ input level
	Spread	0...30	Sets the width of the stereo image of the reverb sound (excluding the early reflections) ☞P.60

c: Pre Delay[ms]
d: ER1 Delay[ms]
e: ER2 Delay[ms]
f: ER3 Delay[ms]
g: ER4 Delay[ms]



04: Reverb-Hall

This is a hall-type reverberation. Setting the four types of early reflections individually allows you to simulate the sound reflections on the front, rear, left, and right walls of a room, creating a more realistic reverb sound. You can also adjust the width of the stereo image of the reverb sound.

05: Reverb-SmoothHall (Reverb-Smooth Hall)

This is a hall-type reverberation with a smooth release. Setting the four types of early reflections individually allows you to add effective ambience to the sound. You can also adjust the width of the stereo image of the reverb sound.

06: Reverb-Wet Plate

This effect simulates a dense plate reverberation. Setting the four types of early reflections individually allows you to add effective ambience to the sound. You can also adjust the width of the stereo image of the reverb sound.

07: Reverb-Dry Plate

This is a light, plate reverberation. Setting the four types of early reflections individually allows you to add effective ambience to the sound. You can also adjust the width of the stereo image of the reverb sound.

a	Output Level	0...100	Output level of effect sound
	Src	None...Tempo	Modulation source of output level
	Amt	−100...+100	Modulation amount of output level
b	Reverb Time[ms] (Reverb Time [sec])	0.1...10.0sec	Sets the reverberation time.
	High Damp[%]	0...100%	Damping amount in the high range.
c	Pre Delay[ms] (Pre Delay [msec])	0...200msec	Delay time from the dry sound ☞P.140
	Pre Delay Thru	0...30	Mix ratio of non-delay sound
d	ER1 Delay[ms] (ER1 Delay [msec])	0...200msec	Delay time of early reflection 1 ☞P.140
	Level	0...30	Early reflection 1 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 1
e	ER2 Delay[ms] (ER2 Delay [msec])	0...200msec	Delay time of early reflection 2 ☞P.140
	Level	0...30	Early reflection 2 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 2
f	ER3 Delay[ms] (ER3 Delay [msec])	0...200msec	Delay time of early reflection 3 ☞P.140
	Level	0...30	Early reflection 3 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 3
g	ER4 Delay[ms] (ER4 Delay [msec])	0...200msec	Delay time of early reflection 4 ☞P.140
	Level	0...30	Early reflection 4 output level
	Pan	L, 1, 2, CNT, 4, 5, R	Stereo image of early reflection 4
h	LEQ Gain[dB] (LEQ [dB])	−15...+15dB	Low-EQ gain
	HEQ Gain[dB] (HEQ [dB])	−15...+15dB	High-EQ gain
i	EQ Trim	0...30	EQ input level
	Spread	0...30	Sets the width of the stereo image of the reverb sound (excluding early reflections) ☞P.60

Index

Numerics

A

C

D

E

F

G

H

L

M

O

P

R

S

T

V

W

NOTICE

KORG products are manufactured under strict specifications and voltages required by each country. These products are warranted by the KORG distributor only in each country. Any KORG product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

KORG INC.
15 - 12, Shimotakaido 1 - chome, Suginami-ku, Tokyo, Japan.

0910 GH *Printed in Japan*